

# UNCLASSIFIED

AD NUMBER
AD465168
NEW LIMITATION CHANGE
TO Approved for public release, distribution unlimited
FROM Distribution authorized to U.S. Gov't. agencies and their contractors; Administrative/Operational Use; May 1965. Other requests shall be referred to Central Intelligence Agency, Office of Central Reference, 2430 E. Street, NW, Washington, DC 20505.
AUTHORITY
CIA ltr, 7 Sep 2004

THIS PAGE IS UNCLASSIFIED

FOR OFFICIAL USE ONLY

CLASSIFIED BY: DCS

465168

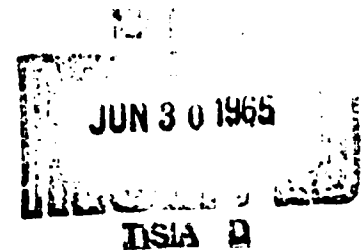
AD NO



# CONSOLIDATED TRANSLATION SURVEY

Number 89

For May 1965



OFFICE OF CENTRAL REFERENCE  
Foreign Documents Division  
CENTRAL INTELLIGENCE AGENCY  
2430 E St., NW., Washington 25, D. C.

FOR OFFICIAL USE ONLY

Best Available Copy

NOTICE: When government or other drawings, specifications or other data are used for any purpose other than in connection with a definitely related government procurement operation, the U. S. Government thereby incurs no responsibility, nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use or sell any patented invention that may in any way be related thereto.

CONSOLIDATED TRANSLATION SURVEY

FOR MAY 1965

TABLE OF CONTENTS

	<u>Page</u>
Preface	iii
Requests For Copies	iv
USSR	
Economic	1
Political	9
Military	10
Geographic	11
Sociological	12
Eastern Europe	
Economic	13
Political	18
Military	18
Geographic	19
Sociological	19
Western Europe	
Economic	19
Political	20
Military	21
Sociological	22
Africa	
Economic	22
Political	22
Military	23
Geographic	24
Sociological	24
Northern Europe	
Economic	25
Middle East	
Political	25
Sociological	25



	<u>Page</u>
<b>Far East</b>	
Economic	25
Political	30
Military	33
Geographic	33
Sociological	33
<b>Latin America</b>	
Economic	34
Political	34
Military	35
Sociological	35
<b>Scientific</b>	
Aerospace	36
Agriculture	38
Biological & Medical Sciences	40
Chemistry	56
Earth Sciences & Astronomy	60
Electronics	68
Engineering	70
Fuels & Propulsion	74
Materials & Metallurgy	74
Mathematics & Data Processing	88
Nuclear Science & Technology	90
Physics	92
Miscellaneous	98
<b>Information on Cover-To-Cover Translations</b>	100
<b>Index to Authors</b>	215

## CONSOLIDATED TRANSLATION SURVEY

### PREFACE

This survey is prepared monthly by the Foreign Documents Division, Office of Central Reference, CIA, from lists received through the cooperation of US government agencies and includes translations prepared by such agencies, private industry, universities, research institutions, and commercial translation organizations. It is a compilation of foreign documentary projects completed or started during the preceding month.

Translations are listed by area and subject category. Scientific projects are grouped as a section regardless of geographic area. Title in English, author, foreign language title of source of material, date of publication, and publication identification of the completed project are given when available. Tables of contents of journals translated cover-to-cover are reproduced from the current publications.

Projects in process, i.e., not completed as of the date of this survey, are noted with an asterisk (\*), and, when available, a project-control or "in-process" number is noted in parentheses following the title. Certain details may be unavailable on such projects. New projects in process are not listed again until they are completed.

An index to authors of items in this issue is provided at the end of the survey.

### REQUESTS FOR COPIES

Requests for copies of published projects should be made direct to the designated producing organization.

All requests for items prefixed by "CIA" should be addressed to Office of Central Reference, 2430 E Street, NW, Washington, D.C. 20505

Addresses of producers follow:

ACIC - Aeronautical Chart and Information Center  
(see CFSTI)

ACSI

Department of Army  
Assistant Chief of Staff, Intelligence  
Intelligence Documents Branch  
Washington 25, D.C.

Requests from non-government sources for Army documents should be ordered through CFSTI.

ACSIL

Admiralty Center for Scientific Information  
and Liaison  
Queen Anne's Mansions  
St. James Park  
London, S.W. 1, England

AEC - Atomic Energy Commission (see CFSTI)

AERE Harwell Lib

The Librarian  
AERE, Ministry of Supply  
Harwell, Didcot, Berks  
England

AF

Department of Air Force  
Assistant Chief of Staff, Intelligence  
ATTN: AFCIN-3D  
Washington 25, D.C.

AI - Atomics International (see AEC)

AIP

American Institute of Physics  
335 East 45th Street  
New York, New York 10017

Amer Math Soc

American Mathematical Society  
190 Hope Street  
Providence 6, Rhode Island

Amer Meteorol Soc

The American Meteorological Society  
45 Beacon Street  
Boston 8, Massachusetts

ANL - Argonne National Laboratory, Illinois  
(see AEC)

ATD - Aerospace Technology Division (see Library  
of Congress)

BISI

British Iron and Steel Industry Translation Service  
The Iron and Steel Institute  
4 Grosvenor Gardens  
London, S.W. 1, England

CAL

Commonwealth Acoustic Laboratory  
Customs House  
Circular Quay  
Sydney, Australia

CB

Consultants Bureau Enterprises, Incorporated  
227 West 17th Street  
New York, New York 10011

CFSTI

Clearinghouse for Federal Scientific and  
Technical Information (Formerly Office of  
Technical Services)  
Port Royal & Braddock Roads  
Springfield, Virginia 22151

CTT

Columbia Technical Translations  
5 Vermont Avenue  
White Plains, New York 10600

DDC RSIC - Defense Documentation Center, Redstone  
Scientific Information Center  
(see CFSTI)

Dir Sci Info Sv, DRB, Canada

Defense Research Member  
Canadian Joint Staff  
1746 Massachusetts Avenue, NW  
Washington, D.C.

Dept of State

Department of State  
Division of Library and Reference Service  
132 State Annex 1  
Washington, D.C.

DIA

Defense Intelligence Agency  
Section: AP-1C  
Building B  
Arlington Hall Station  
Arlington, Virginia

Dover Pub House

Dover Publishing House  
1800 Varick Street  
New York 14, New York

FTD - Foreign Technology Division (see AF)

Heywood & Company, Incorporated  
4 Carmelite Street  
London, E.C. 4

IPST

Israel Program for Scientific Translation  
14 Shammai Street  
P.O. Box 7145  
Jerusalem, Israel

ISA

Instrument Society of America  
530 William Penn Place  
Pittsburgh, Pennsylvania 15219

JPRS

U.S. Department of Commerce  
Clearinghouse for Federal  
Scientific and Technical Information  
Joint Publications Research Service  
Building Tempo E,  
East Adams Drive, 4th & 6th Streets, SW  
Washington, D.C. 20443

LC

Photoduplication Service  
Publication Board Project  
Library of Congress  
Washington, D.C. 20540

Maritime Admin

Maritime Administration  
Office Services  
GAO, 5th and G Streets, NW  
Washington, D.C.

NASA

National Aeronautics and Space Administration  
1512 H Street, NW  
Washington, D.C. 20546

Natl Bu Stand

National Bureau of Standards  
ATTN: Dr Henry Birnbaum  
Room 314, South Building  
Washington, D.C.

Naval Sci and Tech Intell Ctr

Department of the Navy  
CNO/ONI  
922 STIC  
Pentagon

Navy

Department of Navy  
Office of Naval Intelligence  
Washington 25, D.C.

NHL

Circulation Unit  
Readers Services Section  
Library Branch, DRS  
National Institutes of Health  
Building 10, Room 5N118  
Bethesda, Maryland 20014

NLL

National Lending Library  
For Science & Technology  
Boston Spa, Yorkshire, England

North Holland Publishing Company  
68-70 N.Z.  
Voorburgwal, Amsterdam

Oliver & Boyd Ltd

Oliver & Boyd Ltd  
Tweeddale Court  
14 High Street  
Edinburgh 1, England

ONI - Office of Naval Intelligence (see Navy)

ORNL - Oak Ridge National Laboratory (see AEC)

OTS - (see CFSTI)

Patent Office

Patent Office  
Scientific Library  
14th and Constitution Avenue, NW  
Washington, D.C.

PP

Pergamon Press  
122 East 55th Street  
New York, New York 10022

Primary Sources

Primary Sources  
11 Bleecker Street  
New York, New York 10012

Rand Corp

Rand Corporation  
ATTN: Publications Office  
1700 Main Street  
Santa Monica, California

Scripta Technica, Inc

Scripta Technica, Incorporated  
1000 Vermont Avenue, NW  
Washington, D.C. 20005

SIAM

Society for Industrial and Applied Mathematics  
P.O. Box 7541  
Philadelphia 1, Pennsylvania

SLAC - Stanford Linear Accelerator Center - (see AEC)

Soil Sci Soc of Amer, Inc

Soil Science Society of America, Incorporated  
Program Director, Soviet Soil Science  
677 South Segoe Road  
Madison, Wisconsin 53711

TIL - Technical Information Library

Ministry of Aviation  
TIL, 1 (b)  
Leysdown Road  
Mottingham  
London, S.E. 9, England

UCRL - University of California  
Lawrence Radiation Laboratory,  
Livermore, California  
(see AEC)



USSR

Economic

Operation of Petroleum Bases, by L. A. Matskin,  
I. I. Chernyak.  
RUSSIAN, bk, Eksploatatsiya neftebaz, 1965,  
pp 82-87, 135-138, 150, 204-210.  
\*ACSI I-6908  
ID 2204015265

Freshwater Fishes of the USSR and Adjacent  
Countries, by L. S. Berg, 445 pp.  
RUSSIAN, bk, Ryby Presnykh vod SSSR i Sopredel'nykh  
Stran, Vol III, Fourth Edition, Moscow-Leningrad,  
1949.  
CFSTI-63-11087

Specific Features of Planning and Development  
of Novye Cheremushky District, by  
D. Sherstneva, 8 pp.  
RUSSIAN, per, Arkhitektura SSSR, No 1,  
1964, pp 25-35.  
ACSI I-6579  
ID 2204005265

Soviet Railroads Entering Year of 1965, by A. F.  
Podpalyy, 8 pp  
RUSSIAN, per, Avtomatika, telemekhanika, i svyaz',  
No 1, Jan 65, pp 1-3  
JPRS 29753

Basic Directions of Improving Industrial Methods  
of Production in the Automotive Industry, by A. A.  
Anders, 6 pp.  
RUSSIAN, per, Avtomobil'naya Promyshlennost', No 1,  
Jan 1965, pp 1-3  
JPRS 29627

Scientific-Research Institute of the Automotive  
Industry at the Exhibition of Achievements of the  
National Economy of the USSR, by G. V. Leyzerin,  
6 pp.  
RUSSIAN, per, Avtomobil'naya Promyshlennost', No 1,  
Jan 1965, pp 13-14.  
JPRS 29627

Automotive Repair in Uzbekistan Reorganized,  
by M. Kripitser, 6 pp.  
RUSSIAN, per, Avtomobil'nyy Transport, No 10, Oct 64,  
pp. 32-33.  
JPRS 29959

From Operational Experience with Arched Tires, by  
V. Putin, 5 pp  
RUSSIAN, per, Avtomobil'nyy Transport, No 1, Jan 65,  
JPRS 29909

Urgent Problems in Motor Vehicle Repair, by V.  
Yefremov and A. Asriyants, 10 pp  
RUSSIAN, per, Avtomobil'nyy Transport, Jan 65, pp 1-3.  
JPRS 29909

USSR  
Economic (Contd)

Plant For Centralized Refurbishing Of Parts, by  
B. Lots, 3 pp  
RUSSIAN, per, Avtomobil'nyy Transport, No 3, Mar 65,  
pp 23-26.  
JPRS 29392

Lagging Construction Of Experimental Unit At  
Kirovabad Aluminum Plant, by A. Strykov and K.  
Gasanov, 6 pp  
RUSSIAN, np, Bakinskiy Rabochiy, 6 Feb 65, p 2.  
JPRS 29324

The Heavy Machine Building Industry: Key to  
Industrial Progress, by Vladimir Glazyrin, 5 pp.  
RUSSIAN, np, Bakinskiy Rabochiy, 9 Feb 1965, p 2.  
JPRS 29637

The Tasks of the Builders in the Last Year of the  
Seven Year Plan, 5 pp  
RUSSIAN, per, Beton i Zhelezobeton, No 1, Jan 65,  
pp 1-2.  
JPRS 29667

Resolution Of the Council Of Ministers USSR  
Concerning Improvement Of Soviet Accounting  
Procedures, 9 pp  
RUSSIAN, per, Byulleten' Ministerstva Vysshego i  
Srednego Spetsial'nogo Obrazovaniya SSSR, No 2,  
1965, pp 1-5  
JPRS 29897

Introduction of Means of Automation in Construction,  
by A. A. Izmailov, 8 pp  
RUSSIAN, per, Byulleten' Stroitel'noy Tekhniki, No 12,  
Dec 64, pp 29-32.  
JPRS 29730

Introduction of New Equipment At the Moscow  
"Berp I Molot" Plant, by R. S. Birman, 5 pp  
RUSSIAN, per, Byulleten' Tekhniko-Ekonomicheskoy  
Informatsii, No 11, 1964, pp 84-86  
JPRS 29532

The USSR and the Demands Of the Third World, by A.  
Bykov, 7 pp  
FRENCH, per, Democratie Nouvelle, No 1, Jan 65,  
pp 80-83  
JPRS 29741

Multilateral Accounting in Conditions of Socialist  
Collaboration between Countries, by N. Nazarkin, 11 pp.  
RUSSIAN, per, Den'gi i Kredit, No 10, 1964, pp. 10-16.  
JPRS 29996

International Socialist Credit, by N. Mitrofanova,  
10 pp.  
RUSSIAN, per, Den'gi i Kredit, No 10, 1964, pp. 82-88.  
JPRS 29996

USSR  
Economic (Contd)

Increasing the Role of Credit in the Technical Improvement of Production, by S. Yegorov, 8 pp.  
RUSSIAN, per, Den'gi i Kredit, No 12, Dec 64, pp. 3-8.  
JPRS 29950

Basic Areas of Specialization and Consolidation in the Furniture Industry, by S. V. Beloborodov, 6 pp  
RUSSIAN, per, Derevoobrabativayushchaya Promyshlennost', No 1, Jan 65, pp 3-5.  
JPRS 29705

Basic Problems Concerning the National Economic Plan for 1965, by A. Korobov, 9 pp.  
RUSSIAN, np, Ekonomicheskaya Gazeta, No 1, 6 Jan 1965, pp 4-5.  
JPRS 29605

Review and Analysis of the Planned Economy for 1964, 5 pp.  
RUSSIAN, np, Ekonomicheskaya Gazeta, No 1, 6 Jan 1965, p 6.  
JPRS 29605

A Day in the Life of a Chief Economist, by L. Levin, 7 pp  
RUSSIAN, np, Ekonomicheskaya Gazeta, No 1, 6 Jan 65, p 11.  
JPRS 29543

Proper Use of Authority in Administration of Industrial Enterprises, by P. Mokeyev, 6 pp.  
RUSSIAN, np, Ekonomicheskaya Gazeta, No 2, 13 Jan 1965, p 10.  
JPRS 29613

Improved Planning Necessary in Machine-Tool Building, by I. Andrianov, 5 pp  
RUSSIAN, np, Ekonomicheskaya Gazeta, No 2, 13 Jan 65, pp 29.  
JPRS 29557

Planning of Services and Consumption to be Improved in the Soviet Union, by B. Plyshevskiy, 10 pp.  
RUSSIAN, np, Ekonomicheskaya gazeta, No. 4, 27 Jan 1965, pp 5-6.  
JPRS 29633

Demography Is Placed At the Service Of the National Economy, by V. Azar, 6 pp  
RUSSIAN, np, Ekonomicheskaya Gazeta, No 4, 27 Jan 65, p 7.  
JPRS 29781

USSR  
Economic (Contd)

Computers to Bolster Economic Information Service in the Soviet Union, by I. Yevenko, 6 pp.  
RUSSIAN, np, Ekonomicheskaya gazeta, No. 4, 27 Jan 1965, p 12.  
JPRS 29633

Lagging Production Of Fertilizers, 5 pp  
RUSSIAN, per, Ekonomicheskaya Gazeta, No 4, 27 Jan 65, p 15.  
JPRS 29793

Problems in Carbamide Production at the Novo-Kemerovskiy Combine, Kemerovo, Ukrainian SSR, by N. Yakovchuk, 6 pp  
RUSSIAN, per, Ekonomicheskaya Gazeta, 3 Feb 65, p 15.  
JPRS 29730

A Review of Developments in Electric Locomotive Construction, 5 pp  
RUSSIAN, per, Ekonomicheskaya gazeta, No 6, 10 Feb 65, p 18.  
JPRS 29576

The Need For Road Construction In the Russian Federation, by I. Seryakov, 5 pp  
RUSSIAN, np, Ekonomicheskaya gazeta, No 6, 10 Feb 65, p 19.  
JPRS 29576

Problems of Fashion Designing and Production of New Fabrics, 12 pp  
RUSSIAN, np, Ekonomicheskaya gazeta, No 6, 10 Feb 65, pp 32-33.  
JPRS 29706

A Report on Soviet Catamaran Development, by N. Kozlov, 6 pp  
RUSSIAN, np, Ekonomicheskaya gazeta, No 6, 10 Feb 65, p 36.  
JPRS 29576

Better Economic Planning Need At Gor'kiy Motor Vehicle Plant, by M. Dragunov, 5 pp.  
RUSSIAN, np, Ekonomicheskaya Gazeta, No 7, 17 Feb 1965, p 11.  
JPRS 29618

Economic Planning in the Nizhniy Tagil Metallurgical Combine, by I. Divnogortsev and V. Terek, 5 pp.  
RUSSIAN, np, Ekonomicheskaya Gazeta, No 7, 17 Feb 1965, p 15.  
JPRS 29600

Plants Along the River, by Sh. Blank, N. Selezneva, 5 pp  
RUSSIAN, np, Ekonomicheskaya Gazeta, No 3, 1965, p 18.  
JPRS 29562

USSR  
Economic (Contd)

Recommendations Of A Joint Session Of the Scientific Councils Of the Economic Department Of the Academy of Sciences Of the USSR, 7 pp  
RUSSIAN, np, Ekonomicheskaya Gazeta, No 9, 3 Mar 65, p 9.  
JPRS 29828

Excess Of Defective Engines Produced By Serp I Molot Plant, by N. Gubnikov, 5 pp  
RUSSIAN, per, Ekonomicheskaya Gazeta, No 10, 10 Mar 65, p 29.  
JPRS 29311

Industrial Production for the Benefit of the Consumer, by G. Samborskiy, 10 pp.  
RUSSIAN, np, Ekonomicheskaya Gazeta, No 11, 17 Mar 65, pp. 5-6.  
JPRS 30036

Optimal Planning Criterion, by V. Chernyavskiy, 5 pp  
RUSSIAN, np, Ekonomicheskaya gazeta, No 11, 17 Mar 65, p 9.  
JPRS 29663

Regional Specialization and Its Indexes, by V. Kistanov, 5 pp  
RUSSIAN, np, Ekonomicheskaya gazeta, No 11, 17 Mar 65, p 10.  
JPRS 29663

Problems in Soviet Paper-and-Pulp Industry, 13 pp  
RUSSIAN, np, Ekonomicheskaya Gazeta, No 11 (188) 17 Mar 65, pp 14-15.  
JPRS 29581

The Quality of Production and the Quality of Labor, by N. Fedorovich, 11 pp.  
RUSSIAN, np, Ekonomicheskaya Gazeta, No 11, 17 Mar 65, pp. 17-18.  
JPRS 30036

Improvements in Price-Setting Suggested, 6 pp  
RUSSIAN, per, Ekonomicheskaya gazeta, No 12, 24 Mar 65, p 35  
JPRS 29889

Methods Suggested for Improvement in Trade, by A. Struyev, 6 pp  
RUSSIAN, np, Ekonomicheskaya gazeta, No 13, 31 Mar 65, p 36  
JPRS 29889

Coordination Of National-Economic Plans and Production In the Socialist Countries, by O. Bogomolov, 6 pp  
RUSSIAN, np, Ekonomicheskaya Gazeta, No 13, 31 Mar 65, pp 41-42.  
JPRS 29801

USSR  
Economic (Contd)

A Large Reserve of Unused Production Capacity in the Ukraine, by P. Rozenko, 6 pp.  
RUSSIAN, np, Ekonomicheskaya Gazeta, No 15, 14 Apr 1965, p 12.  
JPRS 29947

All-Round Mechanization in Cotton Production, by D. Kuchiyev, V. Platonov, 21 pp  
RUSSIAN, per, Ekonomika sel'skogo khozyaystva, No 11, 1964, pp 36-49.  
JPRS 29670

Construction of Facilities for the Chemical Industry, by B. Ushakov, 5 pp  
RUSSIAN, per, Ekonomika Stroitel'stva, No 12, Dec. 64, pp 3-6.  
JPRS 29730

The Importance of Profit in Construction, by V. Girovsky, 10 pp  
RUSSIAN, per, Ekonomika Stroitel'stva, No 12, Dec 64, pp 55-60.  
JPRS 29730

Economics of Capital Construction, 8 pp  
RUSSIAN, per, Ekonomika Stroitel'stva, No 1, Jan 65, pp 1-6.  
JPRS 29667

Increased Production of Building Materials, by G. Bykov, 9 pp  
RUSSIAN, per, Ekonomika Stroitel'stva, No 1, Jan 65, pp 24-32.  
JPRS 29667

The USSR State Budget and Tasks of Fiscal Bodies For 1965, by V. Garbuzov, 27 pp  
RUSSIAN, per, Finansy SSSR, No 1, Jan 65, pp 3-21.  
JPRS 29303

Certain Financial Problems of Capital Construction, by I. Sher, 11 pp  
RUSSIAN, per, Finansy SSSR, Jan 65, pp 44-52.  
JPRS 29667

Need to Improve the Planning System in Light Industry, by V. Maslennikov, 8 pp  
RUSSIAN, per, Finansy SSSR, No 1, Jan 65, pp 63-68.  
JPRS 29889

Setting Up of Standards for Maximum Permissible Concentrations of Industrial Dust, by S. V. Miller, 6 pp  
RUSSIAN, per, Gigiyena Truda i Professional'nyye Zabolevaniya, Vol 9, No 1, Jan 65, pp 3-6.  
JPRS 29693

USSR  
Economic (Contd)

Raw-Material Base of Metallurgy on Threshold of New Five-Year Plan, 5 pp.  
RUSSIAN, per, Gornyy Zhurnal, No 1, 1965, pp. 3-5.  
JPRS 30046

Progress in Aviation During the Seven-Year Plan, 6 pp  
RUSSIAN, per, Grazhdanskaya Aviatsiya, No 1, Jan 65, pp 2-3.  
JPRS 29753

Transportation Problems in the Western Siberian Depression, by V. Milen'kiy, 3 pp  
RUSSIAN, np, Gudok, 11 Feb, pp 3-4.  
JPRS 29576

The Importance of Economic Analysis in Railway Transportation, L. Levin and F. Fleyshman, 7 pp  
RUSSIAN, np, Gudok, 13 Feb, pp 3-4  
JPRS 29576

Plans For High Speed Trains, by N. Kolodyazhnyy, 7 pp  
RUSSIAN, np, Gudok, 27 Feb 65, pp 2-3  
JPRS 29576

Moscow Machine Building Plants Raise Quality and Precision of Products, by P. Taranichev, 5 pp  
RUSSIAN, np, Izvestiya, 21 Jan 65, p 3.  
JPRS 29729

Soviet Criticism of Books Published in the USSR on Economic-Mathematical Planning Methods, by A. Dorodnitsyn, A. Kolmogorov, B. Gnedenko, A. Vaynshteyn, 5 pp  
RUSSIAN, np, Izvestiya, 24 Jan 65, p 2.  
JPRS 29663

Industrial Achievements in Kazakhstan Through Mechanization and Automation, by T. Gankevich, 6 pp.  
RUSSIAN, np, Kazakhstanskaya Pravda, 22 Jan 1965, p 2.  
JPRS 29637

Electronic-Computer Technique and the Administration of Industry, by V. Karabegov, 6 pp  
RUSSIAN, np, Kommunist, 3 Mar 65, p 2.  
JPRS 29663

Firms Are A Progressive Form of Production Organization, by V. Gromov, 13 pp  
RUSSIAN, per, Kommunist, No 3, Feb 65, pp 58-66.  
JPRS 29538

The Economy of Production Unions, by N. Baykov and I. Kuznetsov, 9 pp  
RUSSIAN, per, Kommunist, No 3, Feb 65, pp 67-72.  
JPRS 29538

USSR  
Economic (Contd)

Soviet Trade: Its Successes, Difficulties and Problems, by I. Lakhman and R. Nazarov, 11 pp  
RUSSIAN, per, Kommunist, No 3, Feb 65, pp 73-78.  
JPRS 29538

The Material Incentive Of the Workers In Increasing Labor Productivity, by V. Rzheshhevskiy, 17 pp  
RUSSIAN, per, Kommunist, No 4, 15 Mar 65, pp 36-45.  
JPRS 29365

Soviet Party Organ Reviews 19th CPSU Session, by B. Miroshnichenko, 14 pp  
RUSSIAN, per, Kommunist, no 4, Mar 65, pp 78-87.  
JPRS 29377

Electroenergetics of the Uzbek SSR: History and Future Lines of Development, by A. Khamidov, 10 pp  
RUSSIAN, per, Kommunist Uzbekistan, No 10-11, 1961 pp 66-73.  
JPRS 29783

Means of Improving the Assortment of Manufactured Footwear, by O. F. Gritsanenko, 5 pp  
RUSSIAN, per, Kozhevenno-Obuvnaya Promyshlennost', No 12, Dec 1964, pp 1-3.  
JPRS 29705

Industrial Development in the Leningradskiy Economic Region, by A. K. Antonov, 11 pp.  
RUSSIAN, np, Leningradskaya Pravda, 13 Feb 65, p. 2.  
JPRS 29947

For the Profitability of Every Article of the Medical Industry!, 5 pp.  
RUSSIAN, per, Meditsinskaya Promyshlennost' SSSR, No 12, Dec 64, pp. 3-5.  
JPRS 29954

Increase in the Level of Economic Work in the Chemical-Pharmaceutical Industry, by B. I. Maymind, 7 pp.  
RUSSIAN, per, Meditsinskaya Promyshlennost' SSSR, No 12, Dec 64, pp. 18-22.  
JPRS 29954

Conference On Introduction Of Full Mechanization and Automation Of Metallurgical Enterprises, 8 pp  
RUSSIAN, per, Mekhanizatsiya i Avtomatizatsiya Proizvodstva, No 1, 1965, pp 52-55.  
JPRS 29901

Measures Adopted for Lowering the Use of Manual Labor at Construction Sites of the State Central Asian Construction Administration, by M. Ya. Yegmas, 11 pp.  
RUSSIAN, per, Mekhanizatsiya Stroitel'stva, No 11, Nov 64, p 3.  
JPRS 29622

USSR  
Economic (Contd)

Developments In Ferrous Metallurgy In 1964 and Plans For 1965, by M. A. Pertsev and S. M. Filippov, 7 pp  
RUSSIAN, per, Metallurg, No 1, 1 Jan 65, pp 1-3.  
JPRS 29901

Improvements in the Production of Specialized Steels, by A. F. Kablukovskiy, 5 pp.  
RUSSIAN, per, Metallurg, No 2, February 1965, pp 1-2.  
JPRS 29600

The Dairy Industry in 1965, 7 pp  
RUSSIAN, per, Molochnaya promyshlennost', No 1, Jan 65, pp 1-3.  
JPRS 29706

Great Efforts Required to Fulfill Plan in Maritime Transport for Final Year of Seven-Year Plan, 7 pp  
RUSSIAN, per, Morskoy Flot, No 1, Jan 65, pp 1-2.  
JPRS 29753

Efforts Towards Raising Precision of Moscow-Produced Machine-Tools, 5 pp  
RUSSIAN, np, Moskovskaya pravda, 10 Jan 65, p 2.  
JPRS 29729

Workers' Personal Initiative Results in Better Production At the Chelyabinsk Tractor Plant, 6 pp  
RUSSIAN, per, Nauchno-Tekhnicheskiye Obshchestva SSSR, No 11, 1964, pp 45-47.  
JPRS 29533

Need for Better Medical Supervision of New Industrial Equipment for the Protection of Workers' Health and Safety, by B. Liguladze, 5 pp  
RUSSIAN, per, Okhrana Truda i Sotsial'noye Strakhovaniye, No 12, Dec 64, pp 13-19.  
JPRS 29544

Distribution Of the Electric Power Load, by V. Ionov, 11 pp  
RUSSIAN, per, Planovoye Khozyaystvo, No 12, Dec 64, pp 38-44.  
JPRS 29630

An Econometric Model for Use in Composing Price-Lists, by A. Matlin, 10 pp.  
RUSSIAN, per, Planovoye Khozyaystvo, No 12, Dec 1964, pp 45-51.  
JPRS 29605

Modern Equipment and Mechanization and Automation Are the Prerequisites of Increased Labor Productivity, by V. Strishov and V. Shelekhov, 6 pp  
RUSSIAN, per, Planovoye Khozyaystvo, No 12, Dec 64, pp 57-60.  
JPRS 29544

USSR  
Economic (Contd)

Enterprises Draw-Up Plans for Scientific Organization of Labor [NOT], by G. Kaganov, 5 pp  
RUSSIAN, per, Planovoye Khozyaystvo, No 12, Dec 64, pp 60-62.  
JPRS 29544

Mastering New Industrial Enterprises, by I. Budnitskiy, 7 pp  
RUSSIAN, per, Planovoye Khozyaystvo, No 1, Jan 65, pp 26-31.  
JPRS 29730

The Future of Large-Scale Chemical Industry in Tadzhikistan, by V. Bondar', 5 pp.  
RUSSIAN, per, Planovoye Khozyaystvo, No 1, 1965, pp 82-84.  
JPRS 30082

Raising the Level of Activities of Economics Laboratories in RSFSR, by V. Kuznetsov, 5 pp  
RUSSIAN, per, Planovoye Khozyaystvo, No 1, Jan 65, pp 93-95.  
JPRS 29663

The Quality of Production and Planning of Cost, by D. Vaynsenker, 8 pp  
RUSSIAN, per, Planovoye Khozyaystvo, Mar 65, pp 1-8.  
JPRS 29663

On Drawing Up the Plan For the Development Of the National Economy For 1966-1970, 13 pp  
RUSSIAN, per, Planovoye Khozyaystvo, No 4, Apr 65, pp 1-13.  
JPRS 29660

Use of Polymers in Machine Building, by N. Semenov I. Al'snits and M. Rokhlin, 7 pp  
RUSSIAN, np, Pravda, 23 Dec 64, p 2.  
JPRS 29729

For Full Utilization of Reserves in Capital Construction, by A. Biryukov, 2 pp  
RUSSIAN, np, Pravda, 11 Jan 65, pp 2 and 3.  
JPRS 29730

To Future Engineers - Economic Knowledge, by M. Chilikin, 5 pp.  
RUSSIAN, np, Pravda, 25 Jan 65, p. 2.  
JPRS 29944

Eliminate Violations of Labor Legislation in Kazakhstan! by A. Nabatov, 5 pp  
RUSSIAN, np, Pravda, 12 Feb 65, p 4,  
JPRS 29701

Uneconomical Use of Precast Reinforced Concrete, by I. Velichkin and P. Voronin, 5 pp  
RUSSIAN, np, Pravda, 16 Feb 65, p 2.  
JPRS 29667

USSR  
Economic (Contd)

Improvements Achieved in 1964 In the National Economy Of the Socialist Countries, by I. Dudinskiy, 7 pp  
RUSSIAN, np, Pravda, 22 Mar 65, p 3.  
JPRS 29801

Better Quality Consumer Goods Demanded, by K. Devet'yarov, 6 pp  
RUSSIAN, np, Pravda, 30 Mar 65, p 2.  
JPRS 29809

Natural Resources Must Be Made Available To the National Economy, by A. Sidorenko, 5 pp.  
RUSSIAN, np, Pravda, 31 Mar 65, p. 2.  
JPRS 30082

Lack of Testing Standards Delay Improvement of Quality of Manufacture, by V. Drozdenko, 7 pp  
RUSSIAN, np, Pravda Ukrainy, 20 Jan 65, p 2.  
JPRS 29556

More Efficient Use of Computers Required in the Ukraine, by L. Pil'kevich, 5 pp  
RUSSIAN, np, Pravda Ukrainy, 21 Jan 65, p 2.  
JPRS 29729

Economic Progress in the Podol'skiy Sovnarkhoz, by I. Stepanenko, 5 pp  
RUSSIAN, np, Pravda Ukrainy, 23 Jan 65, p 2.  
JPRS 29729

Problems of the New Rozdol Mining Chemical Combine, by N. Bosin and A. Bul'ycheva, 5 pp.  
RUSSIAN, np, Pravda Ukrainy, 21 Mar 65, p. 2.  
JPRS 30096

Results Of the XIX All-Union Competition For the Best Proposals For Economizing Electric and Thermal Power, by S. I. Veselov, F. I. Gorin, 6 pp  
RUSSIAN, per, Promyshlennaya Energetika, No 12, 1964, pp 37-39.  
JPRS 29630

Construction of Chemical Enterprises in Short Periods of Time Is the Most Important Task of the National Economy, by A. A. Etmekdzhian, 7 pp  
RUSSIAN, per, Promyshlennoye Stroitel'stvo, Vol 42, No 12, Dec 64, pp 2-5.  
JPRS 29730

Higher Level of Standards Required in Track Facilities, by A. F. Podpalyy, 5 pp  
RUSSIAN, per, Put' i putevoye khozyaystvo, No 1, Jan 65, pp 1-3  
JPRS 29753

USSR  
Economic (Contd)

New Methods of Steel Production In the Ukraine, by N. Tereshchenko, 5 pp.  
RUSSIAN, np, Rabochaya Gazeta, 27 Jan 65, p. 1.  
JPRS 29938

River Transport in the Final Year of the Seven-Year Plan, by S. Kuchkin, 7 pp  
RUSSIAN, per, Rechnoy transport, No 1, Jan 65, pp 1-4.  
JPRS 29753

Volga Rivermen Complete Navigational Plan for 1964, by K. Korotkov, 7 pp  
RUSSIAN, per, Rechnoy transport, No 1, Jan 65, pp 5-6  
JPRS 29753

Urgent Problems in Further Improvement of Petroleum Shipments, by V. Kurdin, 3 pp  
RUSSIAN, per, Rechnoy transport, No 1, Jan 65, pp 7-3  
JPRS 29753

Sequence of Technical Planning of Operation of Adjacent Steamship Companies Requires Changes, by V. Nikolayev, 5 pp  
RUSSIAN, per, Rechnoy transport, No 1, Jan 65, pp 9-10.  
JPRS 29753

A New 450-Horsepower Pusher Tug, by N. Shraylov, 5 pp  
RUSSIAN, per, Rechnoy transport, No 1, Jan 65, pp 23-25.  
JPRS 29753

The New Rules For Construction of Steel Ships For Inland Navigation Of the River Registry RSFSR, by V. Kuznetsov, 3 pp  
RUSSIAN, per, Rechnoy transport, No 1, Jan 65, pp 29-31.  
JPRS 29753

Resolutions On Agriculture By the Council Of Ministers USSR, 7 pp.  
RUSSIAN, np, Sel'skaya Zhizn', 11 Apr 65, pp. 1-2.  
JPRS 30113

Kolkhoz Income Tax Ukase of Presidium, Supreme Soviet USSR, 5 pp.  
RUSSIAN, np, Sel'skaya Zhizn', 11 Apr 65, p. 2.  
JPRS 30113

Skillful Exploitation of the Rich Potentials of Kazakhstan, by D. A. Kumayev, 9 pp.  
RUSSIAN, np, Sel'skaya Zhizn', 11 Apr 65, p. 2.  
JPRS 30113

Law On Pensions and Benefits To Collective Farmers by M. Lantsev, 8 pp  
RUSSIAN, per, Sotsialisticheskiy Trud, No 12, Dec 64, pp 3-7.  
JPRS 29544

USSR  
Economic (Contd)

New Look At Labor and Wages, 6 pp  
RUSSIAN, per, Sotsialisticheskiy Trud, No 1, 1965,  
pp 3-6.  
JPRS 29731

Soviet Economic Experiment, 29 pp.  
RUSSIAN, per, Sotsialisticheskiy Trud, No 2, Feb  
1965, pp 1-24.  
JPRS 29607

A Step Upwards -- On the Introduction of the  
Scientific Organization of Labor at the Minsk  
Tractor Plant, by M. Korenchuk, and Ye. Khanina,  
5 pp  
RUSSIAN, up, Sovetskaya Byelorussiya, 6 Jan 65,  
p 1.  
JPRS 29674

Retail Trade Turnover in 1965, by R. Lokshin,  
11 pp  
RUSSIAN, per, Sovetskaya potrebitel'skaya kooperat-  
siya, No 1, 1965, pp 4-8.  
JPRS 29706

Soviet Cooperative Trade, by G. Al'tshul', I.  
Shaychenko and Yu. Khachaturov, 10 pp  
RUSSIAN, per, Sovetskaya potrebitel'skaya kooperat-  
siya, No 1, 1965, pp 44-50.  
JPRS 29706

Planning and Production At the Kuznetsk Metallurgical  
Plant, by M. Mianik, 6 pp.  
RUSSIAN, up, Sovetskaya Rossiya, 18 Mar 65, p. 2.  
JPRS 30114

Consumer-Cooperative Planning for 1965, by A.  
Balashov, 5 pp  
RUSSIAN, up, Sovetskaya Torgovlya, 16 Jan 65,  
p 2.  
JPRS 29705

Planned Goods' Turnover For 1965, by I. Khrekin,  
7 pp  
RUSSIAN, per, Sovetskaya Torgovlya, No 1, Jan 65,  
pp 5-8.  
JPRS 29705

Installment Purchasing of Consumer Goods, by N.  
Kis'manov and M. Tsvetkov, 7 pp  
RUSSIAN, per, Sovetskaya Torgovlya, No 1, Jan 65,  
pp 18-22.  
JPRS 29705

Problems of Commodity Price Formation, by Professor  
Sh. Turetsky, 11 pp.  
RUSSIAN, per, Sovetskaya Torgovlya, No 2, Feb 65,  
pp. 7-12.  
JPRS 30125

USSR  
Economic (Contd)

New Norms of Goods Reserves, by V. Lyubel'fel'd, 6 pp.  
RUSSIAN, per, Sovetskaya Torgovlya, No 2, Feb 65,  
pp. 18-20.  
JPRS 30125

The Results Of An Experiment In Direct Negotiations  
Between Industry and Trade, by Ya. Orlov, 12 pp.  
RUSSIAN, per, Sovetskaya Torgovlya, No 3, Mar 65,  
pp. 3-9.  
JPRS 30037

Economic Regulation of the Market, by A. Levin, 7 pp.  
RUSSIAN, per, Sovetskaya Torgovlya, No 3, Mar 65,  
pp. 10-14.  
JPRS 30037

New International Legal Form of Economic Collaboration  
(Creation of the International Bank of Economic  
Collaboration), by A. B. Al'tshaler, 15 pp.  
RUSSIAN, per, Sovetskoye Gosudarstvo i Pravo, No 10,  
Oct 64, pp. 54-65.  
JPRS 29996

The Tasks of NTOChM in Furthering Scientific-  
Technical Innovations, by M. A. Pertsev, 10 pp  
RUSSIAN, per, Stal', No 1, 1965, pp 1-4.  
JPRS 29665

Electric Power Economy in Metallurgical Plants  
Should Be Improved, by V. I. Petrikayev, 11 pp  
RUSSIAN, per, Stal', No 1, 1964, pp 5-9.  
JPRS 29665

The Utilization of Fixed Production Assets in  
Ferrous Metallurgy, by M. I. Mityayev, D. I. Popov,  
N. F. Shokin, 13 pp  
RUSSIAN, per, Stal', No 2, 1965, pp 163-168.  
JPRS 29653

New Method of Construction Scheduling and Planning,  
by A. Yakovlev, M. Chernetsov and B. Fayans, 12 pp  
RUSSIAN, up, Stroitel'naya Gazeta, 20 Jan 65, p 3.  
JPRS 29667

Prefabricated Dwelling Construction, by L.  
Bogatkina, 6 pp  
RUSSIAN, up, Stroitel'naya Gazeta, No 16, 7 Feb 65,  
p 2.  
JPRS 29667

Goals of Transport Builders for 1965, by Ye.  
Koshevnikov, 5 pp  
RUSSIAN, up, Stroitel'naya gazeta, 17 Feb 65, p 1.  
JPRS 29753

USSR  
Economic (Contd)

Improving the Technology of Shipbuilding, 9 pp  
RUSSIAN, per, Sudostroyeniye, No 1, Jan 65, pp 1-4.  
JPRS 29753

Lumber Carriers of the "Vytegrales" Type, by  
B. P. Ardashev, V. A. Matskevich, and B. K. Sidorov, 16 pp  
RUSSIAN, per, Sudostroyeniye, No 1, Jan 65, pp 5-12.  
JPRS 29753

Dry-Cargo Vessels for Maritime and River Navigation  
by A. K. Osmolovskiy, 3 pp  
RUSSIAN, per, Sudostroyeniye, No 1, Jan 65, pp 12-15.  
JPRS 29753

Development of "Two-Draft" Ships For Mixed Navigation  
Requires Additional Economic Validation, by A. A.  
Rodionov, 5 pp  
RUSSIAN, per, Sudostroyeniye, No 1, Jan 65, pp 16-17.  
JPRS 29753

Kolkhozes and Sovkhozes Need Reliable Machines, 6 pp  
RUSSIAN, per, Tekhnika v Sel'skom Khozyaystve,  
1 Jan 65, pp 1-3.  
JPRS 29790

Method of Cultivation Of Grain Crops In Teelinnyy  
Kray, by N. Kadushin, 10 pp  
RUSSIAN, per, Tekhnika v Sel'skom Khozyaystve,  
No 1, Jan 65, pp 4-10.  
JPRS 29790

Full Mechanization Is the Most Important Reserve For  
Increase Of Economic Effectiveness of Corn Growing,  
by B. Solov'yev, 7 pp  
RUSSIAN, per, Tekhnika v Sel'skom Khozyaystve, 1 Jan  
65, pp 11-15.  
JPRS 29790

The T-125 Auto Tractor, by A. Levitanus, and M.  
Kushair, 7 pp  
RUSSIAN, per, Tekhnika v Sel'skom Khozyaystve,  
No 2, Feb 65, pp 39-42.  
JPRS 29687

Personal Service in Tire Recconditioning Results in  
Efficiency and Savings, by P. Volk, 5 pp  
RUSSIAN, per, Tekhnika v Sel'skom Khozyaystve,  
No 2, Feb 65, pp 69-71.  
JPRS 29687

Growth of the Textile Industry, 5 pp.  
RUSSIAN, per, Tekstil'naya Promyshlennost', No 1,  
Jan 65, pp. 1-3.  
JPRS 30125

1965 Plans For the Soviet Tractor Industry, by A.  
Ye. Isotov, 6 pp  
RUSSIAN, per, Traktory i Sel'khozmasliny, No 2, Feb  
65, p 1-2.  
JPRS 29754

USSR  
Economic (Conc.)

For Better Construction of Universal Agricultural  
Loaders, by S. G. Betin, 5 pp  
RUSSIAN, per, Traktory i Sel'khozmasliny, No 2,  
1965, pp 18-19.  
JPRS 29754

Tasks of Transport Builders in the Last Year of the  
Seven-Year Plan, 11 pp  
RUSSIAN, per, Transportnoye stroitel'stvo, No 1,  
Jan 65, pp 1-4  
JPRS 29753

Discussion of Measures to Protect the Interests of  
Workers Dismissed by the Management, 10 pp  
RUSSIAN, per, Trud, 11 Feb 65, p 3.  
JPRS 29781

Report on the National Economic State Plan of the  
Turkmen SSR for 1965, Presented at the Fourth  
Session of the Supreme Soviet of the Turkmen SSR,  
by A. K. Gadyrov, 9 pp.  
RUSSIAN, per, Turkmen'skaya Pravda, 23 Dec 1964, p 2.  
JPRS 29637

Comparisons of Indices of Labor Productivity and  
of the Training of Highly Skilled Specialists in  
the USSR and in the U. S., by L. Volodarskiy, 11 pp  
RUSSIAN, per, Vestnik Statistiki, No 12, Dec 64,  
pp 45-51.  
JPRS 29544

Problems of Transportation in the Study of Complex  
Mechanization and Automation of Production, by V. A.  
Drushkov, 5 pp.  
RUSSIAN, per, Vestnik Vysshoy Shkoly, No 12, 1964,  
pp 52-54.  
JPRS 29616

Experimental System of Awarding Bonuses to  
Engineering and Technical Workers, by P. Veselkov,  
18 pp  
RUSSIAN, per, Voprosy Ekonomiki, No 12, Dec 64,  
pp 12-23.  
JPRS 29544

Problems Of the Development Of a System Of Economic  
Indices Of the Work Of Enterprises, by A. Kurakiy,  
11 pp  
RUSSIAN, per, Voprosy Ekonomiki, No 12, Dec 64,  
pp 41-49.  
JPRS 29617

Production of Consumer Goods and Public Demand, by S.  
Partgal, 16 pp.  
RUSSIAN, per, Voprosy Ekonomiki, No 1, Jan 65, pp. 3-13  
JPRS 30037

Certain Structural Aspects of the Balance of the  
National Economy in the Union Republics, by S.  
Turetsky, 18 pp.  
RUSSIAN, per, Voprosy Ekonomiki, No 1, Jan 65,  
pp. 27-40.  
JPRS 30117



USSR  
Economic (Contd)

Criterion Of Optimality Of the National Economic Plan, by B. Smekhov, 17 pp  
RUSSIAN, per, Voprosy Ekonomiki, No 1, Jan 65, pp 123-134.  
JPRS 29317

Regarding the Article By N. Kovalev Entitled: "The Economic-Mathematical Planning Model Of An Efficient Production Structure Of An Economic Region, by V. Volkonskiy et al, 5 pp  
RUSSIAN, per, Voprosy Ekonomiki, No 1, Jan 65, pp 153-155.  
JPRS 29317

Raising the Quality of Industrial Output and the Effectiveness of Social Production, by Yu. Koldomasov, 15 pp  
RUSSIAN, per, Voprosy ekonomiki, No 2, Feb 65, pp 3-13.  
JPRS 29775

Material Incentive For Improvement Of the Quality Of State Farm Animal Husbandry Products, by V. Desyatov, 8 pp  
RUSSIAN, per, Voprosy Ekonomiki, No 2, Feb 65, pp 24-26.  
JPRS 29891

The Economic Effectiveness of Farm Production on An Industrial Basis, by P. Yesaulov and N. Kondratyuk, 12 pp  
RUSSIAN, per, Voprosy Ekonomiki, No 2, Feb 65, pp 62-70.  
JPRS 29891

Model of Inter-Regional Links In a Single Optimum Planning System, by V. Dadayan, 9 pp  
RUSSIAN, per, Voprosy Ekonomiki, No 2, Feb 65, pp 107-114.  
JPRS 29775

Qualitative Changes In the Development Of Machine Building In the USSR, by M. Asval'dov, 15 pp  
RUSSIAN per, Voprosy ekonomiki, No 3, Mar 65, pp 13-23.  
JPRS 29320

Restoration Of Moldavian Cities After the War, by V. Kovtun and D. Fan'yan, 5 pp  
RUSSIAN, per, Voyennyye znaniya, No 2, Feb 65, pp 10-11.  
JPRS 29361

Achievements of Azerbaydzhan SSR in Final Year of the Seven-Year Plan, 11 pp.  
RUSSIAN, per, Vyshka, 26 Feb 65, p.2.  
JPRS 29991

USSR  
Economic (Contd)

Causes of Increased Morbidity with Temporary Loss of Work Capacity in Industry, by V. A. Mozglyakova and V. Ye. Ganina, 7 pp  
RUSSIAN, per, Zdravookhraneniye Rossiyskoy Federatsii, No 1, Jan 65, pp 16-20.  
JPRS 29567

Soviet Russian Shipping in 1964.  
GERMAN, per, Hansa, No 6, Mar 1965.  
Maritime Administration

Political

The International Revolutionary Movement of the Working Class, by B. N. Ponomarev, 432 pp.  
RUSSIAN, bk, Mezhdunarodnoye Revolyutsionnoye Dvizheniye Rabochego Klassa, 1964, 434 pp.  
JPRS 30078

Foreign Policy and the Contemporary World, 18 pp  
RUSSIAN, per, Kommunist, No 3, Feb 65, pp 3-14.  
JPRS 29538

The Historical Experience of the First Russian Revolution, by G. Deborin and A. Manusevich, 13 pp  
RUSSIAN, per, Kommunist, No 3, Feb 65, pp 29-37.  
JPRS 29538

The Building of Communism and the Development of Needs, by V. Afanas'yev and D. Kiknadze, 14 pp  
RUSSIAN, per, Kommunist, No 3, Feb 65, pp 30-47.  
JPRS 29538

Kommunist Article Lambasts West German Defense Minister, by Ya. Viktorov, 6 pp  
RUSSIAN, per, Kommunist, No 3, Feb 65, pp 110-114.  
JPRS 29377

The Ideological Weapon Of the Party, 17 pp  
RUSSIAN, per, Kommunist, No 4, 15 Mar 65, pp 3-14.  
JPRS 29365

Party Leadership Is the Source Of Soviet Army and Navy Power, by P. Rotmistrov, 15 pp  
RUSSIAN, per, Kommunist, No 4, 15 Mar 65, pp 15-24.  
JPRS 29865

A Vitally Necessary Matter, 18 pp.  
RUSSIAN, per, Kommunist, No 5, 7 Apr 65, pp. 3-15.  
JPRS 30043

USSR  
Political (Contd)

The Primary Party Organization and the Activity of Communists, by M. Karpov and Yu. Mel'kov, 17 pp.  
RUSSIAN, per, Kommunist, No 5, 7 Apr 65, pp. 46-56.  
JPRS 30043

Adherence of CPSU Policy To Leninist Principles Reaffirmed, by N. Tarasenko, 7 pp.  
RUSSIAN, np, Leninskoye Znaniye, 15 Apr 65, pp 2-3.  
JPRS 30076

The Soviet View of the Foreign Policy of the British Labor Party, by S. Madzoyevskiy, 13 pp.  
RUSSIAN, per, Mirovaya ekonomika i mezhdunarodnyye otnosheniya, No 3, Mar 65, pp. 39-48.  
JPRS 30085

Soviet Daily Discusses 'National Liberation Movement', by E. Teosyan, 5 pp  
RUSSIAN, np, Moskovskaya Pravda, 26 Mar 65, p 2.  
JPRS 29877

Pablo Segovia Speaks Of Nicaragua in Partiynaya Zhizn', by Pablo Segovia, 7 pp  
RUSSIAN, per, Partiynaya Zhizn', No 6, Mar 65, pp 65-69.  
JPRS 29877

Soviet Journal Discusses Unity and Solidarity In Communist Movement, by Ye. Bugayev, 14 pp.  
RUSSIAN, per, Partiynaya Zhizn', No 7, Apr 65, pp. 50-58.  
JPRS 30076

Concerning the Subjective Aspect Of High Treason Espionage, by B. A. Viktorov, V. I. Kurlyandskiy and S. Dmitriyev, 10 pp  
RUSSIAN, per, Sovetskoye gosudarstvo i pravo, No 2, Feb 65, pp 77-84.  
JPRS 29851

An Answer To the Letter of I. M. Derevyanko, by I. V. Dedorov, 5 pp  
RUSSIAN, per, Vestnik Khirurgii imeni I. I. Grekova, Vol XXIV, No 2, Feb 65, pp 115-118.  
JPRS 29681

Meeting Convened by CPSU Leadership in Moscow on 1 March, 45 pp.  
JAPANESE, np, Akabaya, 13 Apr 65, pp. 1-2.  
JPRS 29970

USSR  
Military

Simple Shelters for Protection Against weapons of Mass Destruction, by A. D. Gorchakov, Yu. A. Zhukov, L. I. Koshelev, N. A. Rossal and A. A. Khomko, 104 pp.  
RUSSIAN, bk, Prosteyskiye Ukrytiya Dlya Zashchity ot Oruzhiya Massovogo Porazheniya, 1964, pp. 1-100.  
JPRS 30003

Missile-Armed Aircraft, by A. N. Ponomarev, 71 pp  
RUSSIAN, bk, Raketonosnaya Aviatsiya, 1964, pp 25-98 and 341-343.  
JPRS 29553

Problems of Theory of P U A Z O - (Instrumentation System of Guidance of Anti-Aircraft Artillery Fire), by N. F. Lavrov.  
RUSSIAN, bk, Zvoprosy Teorii P U A Z O, Moscow, 1960, pp 1-481.  
\*FTD-MT-63-75

Notices to Navigators, 128 pp.  
RUSSIAN, rpt, Izveshcheniya Moreplavatelyam, 4 Jan 64, Notices No 1 to 24, pp 1-75.  
JPRS 29659

Economic, Moral and Political Bases Of the Military Might of States, by Colonel G. Tkachenko, 12 pp  
RUSSIAN, per, Kommunist Vooruzhennykh Sil, No 24, Dec 64, pp 33-45.  
JPRS 29832

The Social Nature and the Mission Of the Army Of the Socialist State by Colonel M. Tulin, 9 pp  
RUSSIAN, per, Kommunist Vooruzhennykh Sil, No 2, Jan 65, pp 45-50.  
JPRS 29832

On Dialectical Negation in Military Science, by Colonel I. Grudinin, 11 pp  
RUSSIAN, per, Kommunist Vooruzhennykh Sil, No 3, Feb 65, pp 52-58.  
JPRS 29832

An Interview With Admiral of the Fleet S. G. Gorshkov, 8 pp  
RUSSIAN, per, Kommunist Vooruzhennykh Sil, No 4, Feb 65, pp 9-23  
JPRS 29760

Fundamentals and Principles of Soviet Military Development During the Period of Transition From Socialism to Communism, by Colonel Ye. Sulimov, 11 pp  
RUSSIAN, per, Kommunist Vooruzhennykh Sil, No 4, Feb 65, pp 9-23.  
JPRS 29760

Authoritative Requirements of Time, on the Subject of Increasing the Scientific Letters of Military Leadership, by M. V. Zakharov, 11 pp.  
RUSSIAN, np, Krasnaya Zvezda, No 28(12551), Feb 4, 1965, pp 2-3. 9696611  
FTD-TT-65-182

**USSR**  
**Military (Contd)**

Party Political Work Under Combat Conditions, 11 pp  
RUSSIAN, np, Krasnaya Zvezda, 4 Mar 65, pp 2-3.  
JPRS 29332

Problems Pertaining to the Detection and  
Destruction of Missile-Armed Nuclear Submarines,  
by P. V. Nikolayev, 7 pp  
RUSSIAN, per, Morskoy Sbornik, No 2, Feb 65,  
pp 22-23.  
JPRS 29393

Leadership Of the CPSU In the Development Of the  
Soviet Armed Forces During the Postwar Period,  
by Colonel General A. Zheltov, 12 pp  
RUSSIAN, per, Voyenno-Istoricheskiy Zhurnal, No 2,  
Feb 65, pp 3-11.  
JPRS 29760

Soviet Military Skill in Operations For the  
Liberation of Hungary, by M. Zakharov, 13 pp  
RUSSIAN, Voyenno-Istoricheskiy Zhurnal, No 2,  
Feb 65, pp 12-22  
JPRS 29760

Supplying Oxygen at Various Altitudes in  
State of Rest and During Work, by  
A. Apollonov, V. Mirolubov, 7 pp.  
RUSSIAN, per, Voyenno San Delo, Vol IX,  
No 4, 1937, pp 8-12. 9696625  
FTD-TT-65-257

Features of Modern Combat, by Lt. General N.  
Shkodunovich, 8 pp  
RUSSIAN, per, Voyennyy Vestnik, No 1, Jan 65,  
pp 43-52.  
JPRS 29760

Survey of Civil Defense Publications, by Z.  
Al'shits, 5 pp  
RUSSIAN, per, Voyennyye Znaniya, No 1, Jan 65,  
JPRS 29563

Control Over Civil Defense Training, by V. Pokhvalin,  
5 pp  
RUSSIAN, per, Voyennyye Znaniya, No 1, Jan 65,  
pp 16-17.  
JPRS 29563

Technical Equipment For Civil Defense, 5 pp  
RUSSIAN, per, Voyennyye Znaniya, No 2, Feb 65,  
pp 13-19.  
JPRS 29361

Radiation Sickness, Its Manifestation and Treatment,  
by P. Safronov, and M. Z. Zhabulina, 6 pp  
RUSSIAN, per, Voyennyye Znaniya, No 2, Feb 65,  
pp 30-31.  
JPRS 29361

**USSR**  
**Military (Contd)**

Improved Planning of Civil Defense Training, by  
Major General G. Isakov, 5 pp.  
RUSSIAN, per, Voyennyye Znaniya, No 3, Mar 65,  
pp. 16-17.  
JPRS 30127

Inspection of Civil Defense Units, by P. Gusev and  
N. Rakitin, 5 pp.  
RUSSIAN, per, Voyennyye Znaniya, No 3, Mar 65,  
pp. 24-25.  
JPRS 30127

The Revolution In Military Science, by Colonel P.  
Myasoyedov, 6 pp  
RUSSIAN, per, Voyennyye Znaniya, No 3, Feb 65,  
pp 36-37.  
JPRS 29332

**Geographic**

The Future Cities of Siberia, 16 pp.  
RUSSIAN, per, Arkhitektura SSSR, No 5,  
1958, 11, 12, and 15-20.  
ACSI I-6462  
ID 2204001765

Specific Features of Planning and Development  
of Novye Cheremushky District, by  
D. Sherstneva, 8 pp.  
RUSSIAN, per, Arkhitektura SSR, No 1, 1964,  
pp 25-35.  
ACSI I-6579  
ID 220400525

The Importance of Geography, by V. Anuchin, 5 pp.  
RUSSIAN, np, Literaturnaya Gazeta, 13 Feb 65, p. 2.  
JPRS 29950

Fourth Congress of the Geographic Society  
of the USSR, by N. G. Konkina, I. M. Raspopov.  
RUSSIAN, per, Vest Leningrad Univ, Ser Geol i  
Geograf, No 24, 1964, pp 158-160.  
\*ACSI I-6392  
ID 2204012865

Agroclimatology Handbook For the Amur Oblast,  
by Editor in Chief P. A. Frolova, 120 pp.  
RUSSIAN, np, Agroklimaticheskiy Sbornik  
Amurskoy oblasti, Khabarovsk, 1960, pp 1-155.  
ACSI I-6251  
ID 2204037064

USSR  
Sociological

From Enrollment to Diploma - Is It Impossible To Manage Without Exams? by V. Bal' and A. Shcherbakov, 5 pp.  
RUSSIAN, np, Izvestiya, 5 Dec 64, p. 5.  
JPRS 29944

The Education of Youth Is a Party Matter, by N. Yegorychev, 21 pp  
RUSSIAN, per, Kommunist, No 3, Feb 65, pp 15-28.  
JPRS 29538

Concrete Studies of Social Processes, by V. Shubkin, 15 pp  
RUSSIAN, per, Kommunist, No 3, Feb 65, pp 48-57.  
JPRS 29538

A Study Of the History Of Religion, by A. Okulov, 5 pp  
RUSSIAN, per, Kommunist, No 4, 15 March 65, pp 115-117.  
JPRS 29365

Philosophy and Its Contemporary Problems, by N. Bikkennin, S. Oduyev, A. Pozner, and G. Smirnov, 15 pp.  
RUSSIAN, per, Kommunist, No 5, 7 Apr 65, pp. 57-74.  
JPRS 30043

Improvement in Methods of Instruction Needed in USSR Medical Schools, by B. Danilov, 5 pp.  
RUSSIAN, per, Meditinskaya Gazeta, 2 Mar 65, p. 2.  
JPRS 30029

The Distortions By Vyshinskiy In the Theory Of Soviet Law and Practice, by N. V. Zhogin, 41 pp  
RUSSIAN, per, Sovetskoye Gosudarstvo i Pravo, No 3, Mar 65, pp 22-31.  
JPRS 29302

Further Improvement of Medical Service to the Population of the Republic, by V. A. Petros'yants, 10 pp  
RUSSIAN, per, Sovetskoye Zdravookhraneniye Kirgizii, No 1, Jan-Feb 65, pp 7-14.  
JPRS 29895

Women In the USSR, 19 pp  
RUSSIAN, per, Vestnik Statistiki, No 2, Feb 65, pp 85-96.  
JPRS 29390

The Higher Schools and the Program of the CPSU, 6 pp.  
RUSSIAN, per, Vestnik Vyshey Shkoly, No 4, 1964, pp. 3-7.  
JPRS 30051

USSR  
Sociological (Contd)

Brief Summary of Programmed Instruction in the Soviet Union, by G. N. Aleksandrov, 6 pp.  
RUSSIAN, per, Vestnik Vyshey Shkoly, No 4, 1964, pp. 45-49.  
JPRS 30050

Audio-Visual Syntheses and the Teaching of Spoken Language, by I. Yu. Shekhter, 5 pp;  
RUSSIAN, per, Vestnik Vyshey Shkoly, No 4, 1964, pp. 53-57.  
JPRS 30050

Strengthening the Union of Philosophers and Natural Scientists in the Higher School, by L. Ya. Stanis, 6 pp.  
RUSSIAN, per, Vestnik Vyshey Shkoly, No 4, 1964, pp. 78-84.  
JPRS 30051

To Consider the Goals and Nature of Instruction, by P. N. Platonov, K. I. Kutsenko, and I. M. Berman, 10 pp.  
RUSSIAN, per, Vestnik Vyshey Shkoly, No. 9, 1964, pp 22-27.  
JPRS 29640

It Is Time to Generalize Experience, by V. P. Bespal'ko and A. V. Nikol'skiy, 5 pp.  
RUSSIAN, per, Vestnik Vyshey Shkoly, No 9, 1964, pp. 27-30.  
JPRS 29640

What Is the Essence of the New Method of Instruction? by G. I. Makarova, 7 pp.  
RUSSIAN, per, Vestnik Vyshey Shkoly, No 12, 1964, pp 26-30.  
JPRS 29616

Ways of Improving Physician Training, by B. V. Petrov, 6 pp  
RUSSIAN, per, Zdravookhraneniye Rossiyskoy Federatsii, No 1, Jan 65, pp 23-32.  
JPRS 29567

# EASTERN EUROPE

## Eastern Europe Economic (Contd)

### Economic

Shortcomings in Party Management of the Economy,  
by Haki Toska, 22 pp  
ALBANIAN, per, Rruga e Partise, No 1, Jan 65,  
pp 11-27  
JPRS 29527

Party Daily Urges Economies in Use of Imported  
Goods, 5 pp  
ALBANIAN, np, Zeri i Popullit, 26 Feb 65, p 1.  
JPRS 29527

Regulation on the Crediting of Housing Construction  
by D. Popov, 21 pp.  
BULGARIAN, per, Durzhaven vestnik, No 31, 20 Apr 65,  
pp. 1-5.  
JPRS 30103

The Most Important Tasks in Bulgarian Electric  
Power Production, 1965, by Engr Konstantin Popov,  
5 pp  
BULGARIAN, per, Elektroenergiya, No 12, Dec 64,  
pp 1-2.  
JPRS 29797

Decree on the Creation of the "Rodopa" State Economic  
Union for the Purchase of Livestock for Slaughter,  
Fattening and Export Alive or Slaughtered, for Meat  
Processing and Commerce in Meat and Meat Products,  
Fodder, Etc., 8 pp.  
BULGARIAN, np, Durzhaven Vestnik, No 12, 12 Feb 65,  
pp. 1-3.  
JPRS 29946

Progress of the Bulgarian Electric Product Industry,  
by Svetlin Kiradzhiev, 5 pp.  
BULGARIAN, per, Geografiya, No XIV, Nov 64, pp. 1-4.  
JPRS 30041

Tasks For Bulgarian Agriculture in 1965, by Atanas  
Tsanev, 6 pp  
BULGARIAN, per, Kooperativno zemedelie, No 2,  
Feb 65, pp 1-2  
JPRS 29344

The Indivisible Fund Is the Basis For Expanding  
Reproduction In Farm Workers' Cooperatives, by A.  
Petkov and V. Smirnova, 14 pp  
BULGARIAN, per, Planovo stopanstvo i statistika,  
No 1, Jan 65, pp 24-32.  
JPRS 29371

Some Problems In the Professional Qualification  
Structure Of Manpower In Agriculture, by Todor  
Avramov, 9 pp  
BULGARIAN, per, Planovo stopanstvo i statistika,  
No 1, Jan 65, pp 33-41  
JPRS 29871

Movement of the Population Within the Country and  
the Effect of this Movement on Manpower in Bulgaria,  
by Minko Minkov, 16 pp  
BULGARIAN, per, Planovo stopanstvo i statistika, No 1,  
Jan 65, pp 42-52.  
JPRS 29832

Economic Effectiveness of Capital Investments in  
State Farms and Ways for Increasing It, by Lilyana  
Bozukkova, 15 pp  
BULGARIAN, per, Planovo stopanstvo i statistika,  
No 2, Feb 65, pp 23-33.  
JPRS 29721

Some Conclusions from Financial Audits, by Khristo  
Draganov, 12 pp.  
BULGARIAN, per, Schetovodstvo i Kontrol, No 9, Nov 64,  
pp. 16-25.  
JPRS 29928

The Work of the Khidrostroy (Water Engineering)  
DSU (State Construction Administration) in the  
Years 1950-1965, 5 pp.  
BULGARIAN, per, Stroitelstvo, No 1, Jan 65, pp. 1-2.  
JPRS 30105

The Construction of the "Ivaylovgrad" Hydroelectric  
Power System, by Engr Georgi Peshev, 18 pp.  
BULGARIAN, per, Stroitelstvo, No 1, Jan 65, pp. 3-9.  
JPRS 30105

The Development of Bulgarian Railway Transportation  
in 1965, 7 pp  
BULGARIAN, per, Zhelezoputen transport, No 1, Jan 65,  
pp 1-4  
JPRS 29796

A New System of Planning and Economic Management,  
by Khristo Demirchev, 11 pp  
BULGARIAN, per, Zhelezoputen transport, No 1, 1965,  
pp 4-8.  
JPRS 29793

Construction of the Dubrovnik Hydroelectric  
Power Plant,  
CROATIAN, per, Gradevinar, Vol XVI, No 11,  
Nov 1964.  
\*ACSI I-6746  
ID 2204020165

Yugoslav Transportation in 1964, by B. Markovic, 7 pp  
CROATIAN, per, Medijunarodni Transport, No 1, Jan 65,  
pp. 5-8.  
JPRS 30030

Tendencies in the Socialization of Land through  
Purchase in 1964, by Novica Mitic, 8 pp  
CROATIAN, per, Produktivnost, Vol VII, No 1, Jan 65,  
pp 14-16.  
JPRS 29721

Eastern Europe  
Economic (Contd)

Regulations Concerning Method of Computation and Payment of Contributions from Personal Income of Workers, 13 pp  
CROATIAN, per, Sluzbeni list SFRJ, Vol XXI, No 11, 17 Mar 65, pp 361-365.  
JPRS 29680

Basic Law on Radio Broadcasting Stations, 6 pp.  
CROATIAN, per, Sluzbeni List SFRJ, No 15, 5 Apr 65, pp. 646-650.  
JPRS 30108

Law on Trade in Pharmaceuticals, 11 pp.  
CROATIAN, per, Sluzbeni List SFRJ, No 15, 5 Apr 65, pp. 700-703  
JPRS 30103

Economics and Prices in Air Traffic, by A. Avejic.  
CROATIAN, Vazdušni Transport, pp 41-42.  
\*ACSI 1-6764  
ID 2204010565

The New Method of Handling Collections in Brno and Plzen, 10 pp  
CZECH, per, Ceskoslovenske Spoje, Vol 10, No 1, Jan 65, pp 27-30.  
JPRS 29539

Czechoslovak Foreign Policy in Transportation, by Dr. Jaromir Rezabek, 11 pp  
CZECH, per, Doprava, No 1, Jan 65, pp 4-8.  
JPRS 29539

Technical and Economic Mapping and Technological Development, by Trnka, Pichlik, Prazak, et al.  
CZECH, per, Geodetický a Kartografický Úbzor, No 9-10, 1964, pp 222-226.  
\*ACSI 1-6654  
ID 2204007465

The Place and Purpose of State Farms, by Miroslav Zich, 12 pp  
CZECH, per, Nova Mysl, No 2, Feb 65, pp 199-208.  
JPRS 29654

Gross Income and the Logic Of the New Economic System, by Frantisek Boreš, 20 pp  
CZECH, per, Nova Mysl, No 3, Mar 65, pp 312-325  
JPRS 29794

Finance, Credit and Interest In the New Economic System, by Rudolf Rohlíček, 10 pp  
CZECH, per, Nova Mysl, No 3, Mar 65, pp 326-339.  
JPRS 29794

The 1965 Plan for Development of the Czechoslovak National Economy, and the Structure of the State Budget, by O. Černík and R. Dvorský, 25 pp.  
CZECH, np, Rude Pravo, 10 Dec 1964, pp 3-4.  
JPRS 29587

Eastern Europe  
Economic (Contd)

On Some Views Regarding the New System of Management, by Zdislav Sulc, 7 pp.  
CZECH, np, Rude Pravo, 13 Mar 1965, p 3.  
JPRS 29619

Traffic Safety - Constant Concern of Railroad Workers, by Jaromir Kolacny, 3 pp  
CZECH, per, Zivot Strany, No 2, 1965, pp 87-90.  
JPRS 29539

Make Better Use of Market Mechanism, by Antonín Nesvadba, 8 pp.  
CZECH, per, Zivot Strany, No 3, 1965, pp 161-164.  
JPRS 29923

Prospects for Long-Range Cooperation in CEMA, by Josef Kotrc, 7 pp.  
CZECH, per, Zivot Strany, No 5, Mar 65, pp. 269-272.  
JPRS 30106

Reports for the Civilian Aviation of the German Democratic Republic, 31 pp.  
GERMAN, rpt, Nachrichten für die Zivile Luftfahrt der Deutschen Demokratischen Republik, 1964, pp 6-19. 9696615  
FTD-TT-64-1029

Economic Growth and Foreign Trade, by Prof. Dr. G. Kohlmeier, 17 pp.  
GERMAN, per, Aussenhandel und Innerdeutscher Handel, No 3, Vol 15, Mar 65, pp.1-7.  
JPRS 29990

Developments in Inland Ship Transport in Poland.  
GERMAN, per, Binnenschifffahrts-Nachrichten, No 6, 1965, pp 92, 94.  
\*ACSI 1-6931  
ID 2204015165

Status of Development and Prospects of the Track Interlocking Control Plant, by Diploma Eng. F. W. Bretschneider, 10 pp  
GERMAN, per, Deutsche Eisenbahn Technik, No 3, Vol 13, Mar 65, pp 97-101  
JPRS 29902

Tasks of the Finance, Banking and Price Organs in 1965, by Horst Kaminsky, 17 pp  
GERMAN, per, Deutsche Finanzwirtschaft, No 24, Dec 64, pp 4-7 and No 1, Jan 65, pp 6-9.  
JPRS 29793

The Cybernetic Character of the New Economic System and the Model Structure of Long-Range Planning As a Systematic Cybernetic Process, by Klaus Dieter Wustneck, 34 pp.  
GERMAN, per, Deutsche Zeitschrift für Philosophie, Vol 13, No 1, Jan 65. pp. 5-31.  
JPRS 30013

**Eastern Europe  
Economic (Contd)**

Financing of 1965 Current Funds in Line with the New Economic System, by Werner Sanner and Horst Heere, 8 pp  
GERMAN, per, Finanzen und Buchführung, No 5, Mar 65, pp F3-F5.  
JPRS 29714

New Forms of Foreign Trade Activity in East Germany's Automobile Industry, by G. Nowak, 5 pp  
GERMAN, per, Kraftfahrzeugtechnik, No 3, Mar 65, pp 82-84  
JPRS 29577

New Freight Tariff for Carloads on the Czechoslovak State Railroads, by K. Povysil, 5 pp  
GERMAN, per, OSShD Zeitschrift der Organisation fuer die Zusammenarbeit der Eisenbahnen, No 1, Vol VIII, Jan-Feb 65, pp 13-14.  
JPRS 29902

Committee Work of the Organization for Railroad Cooperation, 10 pp  
GERMAN, per, OSShD Zeitschrift der Organisation fuer die Zusammenarbeit der Eisenbahnen, No 1, Vol 8, Jan-Feb 65, pp 22-26.  
JPRS 29902

Future of the Cement Industry, by Karl Heinz Naumann and Horst Tarras, 14 pp  
GERMAN, per, Silikattechnik, No 12, Dec 64, pp 375-380.  
JPRS 29679

Status of the Punch Card System in the GDR Evaluation of the 1964 Report, by Claus Stark, 5 pp.  
GERMAN, per, Die Wirtschaft, 11 Mar 65, p.10.  
JPRS 29928

New Bases for East-West German Trade Relations Needed, by Kurt Fenske, 6 pp.  
GERMAN, per, Die Wirtschaft, 10 Mar 65, pp 16-17.  
JPRS 29712

East German - Soviet Foreign Trade, 1955-1963, 8 pp.  
GERMAN, per, Wochenbericht, No 14, 2 Apr 65, pp. 64-66.  
JPRS 29929

Berlin Is Still Berlin - Passenger Navigation on the Spree and Havel, by Kurt Groggert.  
GERMAN, per, Zeitschrift für Binnenschiffahrt, No 5, 1958, pp 193-203.  
\*ACSI I-6545  
ID 2204005805

Information on OSShD Commission Work, 30 pp.  
GERMAN, per, Zeitschrift der Organisation für die Zusammenarbeit der Eisenbahnen, Vol 7, No 6, Nov-Dec 1964, pp 17-32.  
JPRS 29590

**Eastern Europe  
Economic (Contd)**

Hungarian Regulations for Economic and Scientific-Technical Cooperation with Other Socialist Countries, 10 pp.  
HUNGARIAN, per, Akademiai Kozlony, No 5, 29 Mar 65, pp. 42-45.  
JPRS 30160

Tasks of the Center for the Utilization of Aluminum and Its Activities in 1964, by Andras Domony, 7 pp.  
HUNGARIAN, per, Kohaszati Lapok, Mar 65, No 3, pp. 125-128.  
JPRS 30041

Practical Experiences with the Investment Code, by Bela Peter, 18 pp.  
HUNGARIAN, per, Kozgazdasagi Szemle, No 3, Mar 65, pp. 280-293.  
JPRS 29928

Development of Hungary's Position in the International Division of Labor, by Imre Vajda, 25 pp.  
HUNGARIAN, per, Kozgazdasagi Szemle, No 4, Apr 65, pp. 424-442.  
JPRS 30106

On the Development and Future Perspectives of Domestic Trade, by Imre Fenyo, 24 pp.  
HUNGARIAN, per, Kozgazdasagi Szemle, No 4, Apr 65, pp. 474-490.  
JPRS 29990

The Exchange of Technical and Scientific Information with the Socialist Countries, 8 pp.  
HUNGARIAN, per, Kulkereskedelmi Ertesito, No 8, Vol XIII, 28 Mar 65, pp. 45-48.  
JPRS 29929

Report On the Industrial Application Of Mathematical Statistics, by Istvan Vincze, 4 pp  
HUNGARIAN, per, Magyar Tudomany, Vol IX, No. 12, Dec 64, pp 771-775.  
JPRS 29139

Decree of the Ministry of Agriculture and the Ministry of Labor on the Education of Skilled and Trained Agricultural and Forestry Workers, 21 pp.  
HUNGARIAN, per, Mezogazdasagi Ertesito, Vol XVI, No 8, 25 Feb 65, pp.109-118.  
JPRS 29946

The Exchange Rate for Foreign Trade, by Dr. Bela Bakonyi, 5 pp  
HUNGARIAN, per, Penzugyi Szemle, No 1, Jan 65, pp 21-25  
JPRS 29712

The Investment Financing System of the CEMA Countries by Laszlo Szabo, 12 pp  
HUNGARIAN, per, Penzugyi Szemle, No 2, Feb 65, pp 159-167  
JPRS 29752

Eastern Europe  
Economic (Contd)

Productivity Trends in Hungarian Industry, by Dr. Zoltan Roman, 41 pp.  
HUNGARIAN, per, Statisztikai Szemle, No 3, Mar 65, pp. 227-246.  
JPRS 30073

The Development of Hungarian Industry during 1949-1964, by Mrs. Ferenc Nyitrai, 18 pp.  
HUNGARIAN, per, Statisztikai Szemle, No 4, Apr 65, pp. 355-366.  
JPRS 30073

Problems in Technical Progress in the Construction and Maintenance of Roads and Bridges at the Beginning of the New Five Year Period (1960-1970), by Stefan Rolla.  
POLISH, per, Droownictwo, No 10, Oct 1964, pp. 227-231.  
\*ACSI I-6652A  
ID 2204007105

Road Construction in Bulgaria, by S. Janew.  
POLISH, per, Droownictwo, No 10, Oct 1964, pp. 244-247.  
\*ACSI I-6652B  
ID 2204007165

The National Economic Plan for 1965, by Zdzislaw Deutschman, 17 pp  
POLISH, per, Gospodarka Planowa, No 2, Feb 65, pp 1-9.  
JPRS 29680

Improvement in Market Supply - One of the Major Problems of the Economy, by Janusz Szymanczyk, 14 pp  
POLISH, per, Gospodarka Planowa, No 2, Feb 65, pp 10-16.  
JPRS 29680

Investigation of the Economic Effectiveness of Cooperation among CMEA Nations, by Artur Markowski and Helena Jaminaka-Moldava, 11 pp  
POLISH, per, Gospodarka Planowa, No 2, Feb 65, pp 27-32.  
JPRS 29712

Gas In the Polish Fuel Balance, by Bronislaw Podgorny and Witold Czernek, 10 pp  
POLISH, per, Gospodarka Planowa, No 2, Feb 65, pp 32-37.  
JPRS 29679

Problems of Wage Fund Management and Control, by Bronislaw Blass, 12 pp.  
POLISH, per, Gospodarka Planowa, No 3, Mar 65, pp. 14-19.  
JPRS 30093

Eastern Europe  
Economic (Contd)

Should Factory Prices Be Average Branch Prices or Plant Prices, by Ryszard Wilczewski and Jan Sliwa, 10 pp.  
POLISH, per, Gospodarka Planowa, No 3, Mar 65, pp. 44-48.  
JPRS 30093

Expansion Of Supply Base For the Machine Building Industry, by Stanislaw Kawinski, 5 pp  
POLISH, per, Gospodarka Planowa, No 3, Mar 65, pp 61-63.  
JPRS 29833

Charging of Interest on Fixed and Current Assets Discussed, by Jan Sliwa, 6 pp.  
POLISH, per, Gospodarka Planowa, No 3, Mar 65, pp. 65-68.  
JPRS 30093

Scientific and Technological Development Trends in Chemical Processing of Coal, by Henryk Zielinski, 16 pp  
POLISH, per, Koks-Snola-Gaz, Vol 9, No 6, Nov-Dec 1964, pp 185-192.  
JPRS 29738

Production and Properties of Lignofol, by Mgr. Inz. Robert Sikora, 6 pp  
POLISH, per, Mechanik, No 12, Dec 64, pp 714-716  
JPRS 29536

'Lignofol' for the Construction of Machines, by Robert Sikora, 5 pp  
POLISH, per, Mechanik, Vol 38, No 1, Jan 65, pp 21-23.  
JPRS 29738

Discussion of the Problem of Spare Parts Is Suspended, by Andrzej Flucinski, 10 pp.  
POLISH, per, Mechanizacja Rolnictwa, No 5, 1-15 Mar 65, pp. 8-11 and 23.  
JPRS 29946

Development of the Petroleum Industry during 20 Years of Peoples Poland, by Antoni Cwierz.  
POLISH, per, Nafta, No 9, 1964, pp 234-236.  
\*ACSI I-6664J  
ID 2204007265

Achievements and Goals of the Petroleum Industry, by Magister Inz. Franciszek Jopka, 7 pp.  
POLISH, per, Nafta, No 1, Jan 1965, pp 1-5.  
JPRS 29589



Eastern Europe  
Economic (Contd)

- Grobla Crude Oil Well, by Prof. Mgr. Inz. Zdzislaw Wilk, 5 pp  
POLISH, per, Nafta, No 2, 1965, pp 46-48.  
JPRS 29716
- Used Oil Economy in Poland, by Inz. Tadeusz Kotecki, 8 pp  
POLISH, per, Nafta, No 2, Feb 65, pp 51-54.  
JPRS 29716
- Trends in Improving the Finance System, by Jerzy Albrecht, 20 pp  
POLISH, per, Nowe Drogi, No 4, Apr 65, pp 75-92.  
JPRS 29739
- Achievements Of the Electrical Machine Industry In 1961-1965, by Wladyslaw Dudzinski, 8 pp  
POLISH, per, Zycie Gospodarcze, No 15, 11 Apr 65, pp 1, 8.  
JPRS 29883
- The Chemical Industry in the Period 1961-1965, by Wladyslaw Dudzinski, 9 pp.  
POLISH, per, Zycie Gospodarcze, No 17, 25 Apr 65, pp 1, 4-5.  
JPRS 30104
- Intensified Investment Banking Control in Rumania, by M. Diamandopol, 11 pp.  
RUMANIAN, per, Finante si Credit, No 1, Jan 1965, pp 11-26.  
JPRS 29619
- Present Problems in the Development of State Farms, by Bucur Schiopu, 20 pp  
RUMANIAN, per, Lupta de Clasa, No 2, Feb 65, pp 15-26.  
JPRS 29537
- A New Economic Installation on the Map of the Country, by Iuliu Grigore.  
RUMANIAN, per, Natura, Ser Geografic-Geologic, Vol XVI, No 6, 1964, pp 55-57.  
\*ACSI 1-66303  
ID 2204005305
- Characteristics of the State Budget under Socialism, by A. Babe, 16 pp  
RUMANIAN, per, Probleme Economice, Vol. 18, No. 2, Feb 65, pp 18-30.  
JPRS 29714
- Development of Research in Rumanian Construction and Construction Materials Industries, by D. F. Dumitrescu and S. Caspar, 18 pp.  
RUMANIAN, per, Revista Constructiilor si a Materialelor de Constructii, No 10, Oct 64, pp 501-509.  
JPRS 29604

Eastern Europe  
Economic (Contd)

- Implementation of Technical Specifications in Construction During the Last 20 Years, by C. Silistrianu, 8 pp.  
RUMANIAN, per, Revista Constructiilor si a Materialelor de Constructii, Vol 16, No 11, Nov 64, pp. 557-560.  
JPRS 30030
- Successful Accomplishment Of the 1964-Plan Tasks In the Forestry Economy, by St. Pirvulescu, 5 pp  
RUMANIAN, per, Revista Padurilor, No 2, Feb 65, pp 57-58.  
JPRS 29771
- Development of Rumanian Agricultural Production, by Vilceanu, Lazar, Constantin, and Grigorescu, 7 pp  
RUMANIAN, per, Viata Economica, No 12, 19 Mar 65, pp 8, 9.  
JPRS 29537
- Possibilities For A More Complete Determination Of the Real Income of the Population, by St. Magureanu and Gh. Lupas, 6 pp.  
RUMANIAN, per, Viata Economica, No 17, 23 Apr 65, p. 4.  
JPRS 30073
- New Residential Construction in Yugoslavia, by V. Belousov, 8 pp.  
RUSSIAN, per, Arkhitektura SSSR, No 1, 1964, pp 53-59.  
ACSI 1-6579  
ID 2204005265
- Polish-Soviet Economic Cooperation, by Petr Jaroszewicz, 5 pp  
RUSSIAN, per, Ekonomicheskaya Gazeta, No 14, 7 Apr 65, p 40.  
JPRS 29901
- Comparison between Levels of Primecost of Agricultural Production in CMEA Countries, by Yu. Kormov and I. Motorin, 15 pp.  
RUSSIAN, per, Planovoye Khozyaystvo, No 1, 1965, pp. 32-43.  
JPRS 29996
- The Participation of Hungary in the International Socialist Division of Labor, by Marek Laszlo, 11 pp  
RUSSIAN, per, Planovoye Khozyaystvo, No 3, Mar 65, pp 56-63.  
JPRS 29752
- Exhibition of Fabrics and Clothes Manufactured by CMEA Countries, by Ye. N. Arens, 7 pp.  
RUSSIAN, per, Tekstil'naya Promyshlennost', No 12, Dec 64, pp. 14-18.  
JPRS 29996

Eastern Europe  
Economic (Contd)

Stimulation of New Technology and Raising of Product Quality in the European Peoples Democracies, by V. Bochkova and D. Butakov, 16 pp  
RUSSIAN, per, Voprosy ekonomiki, No 3, Mar 65, pp 51-61.

JPRS 29712

Personal Incomes in the Socialized Sector Of the Economy, 12 pp.

SERBO-CROATIAN, per, Jugoslovenski pregled, No 1, Jan 65, pp. 15-18.

JPRS 30073

Yugoslav Import by River, by Stevan M. Jungic, 10 pp.

SERBO-CROATIAN, per, Medjunarodni Transport, No 2, Feb 65, pp. 48-51.

JPRS 30108

The Lack of Accord in the Principles of the System for Financing Current Assets, by Predrag Nerendacic, 5 pp.

SERBO-CROATIAN, per, Nova trgovina, No 1, January 1965, pp 13-14.

JPRS 29202

Basic Market Inspectorate Law, 13 pp.

SERBO-CROATIAN, per, Sluzbeni List SFRJ, No 12, Mar 24, 65, pp. 419-422.

JPRS 30103

Political

Law on Travel Documents of Yugoslav Citizens, 14 pp.

CROATIAN, per, Sluzbeni List SFRJ, 24 Mar 65, pp 436-440.

JPRS 30103

Law on Movement and Sojourn of Foreigners in Yugoslavia, 74 pp.

CROATIAN, per, Sluzbeni List SFRJ, No 13, 31 Mar 65, pp. 472-479.

JPRS 29981

Law on Border Crossings and Movement in the Border Zone, 17 pp.

CROATIAN, per, Sluzbeni List SFRJ, No 13, 31 Mar 65, pp. 479-484.

JPRS 29983

Law on Amendments and Additions to the Law on Organization and Financing of Social Security, 41 pp.

CROATIAN, per, Sluzbeni List SFRJ, No 13, 31 Mar 65, pp. 486-498.

JPRS 29983

Eastern Europe  
Political (Contd)

Basic Law on Legal Staffs to Defend the Interests of Socio-Political Communities, 13 pp.

CROATIAN, per, Sluzbeni List SFRJ, No 15, 5 Apr 65, pp. 639-643.

JPRS 30103

Victory of Leninist Policy on Nationalities, by Jura Zvara and Frantisek Prikryl, 11 pp

CZECH, per, Zivot Strany, No 2, Jan 65, pp 78-82.

JPRS 29720

The Political Task Is Concerned Here, by Vladimir Gerloch, 5 pp.

CZECH, per, Zivot Strany, No 3, 1965, pp. 133-135.

JPRS 30102

Austrian Dissident Communist Periodical Denies the

"Rule By All" Slogan As Revisionist, 5 pp

GERMAN, per, Rote Fahne, No 32, 15 Mar 65, pp 3-7.

JPRS 29707

Comrade Wladyslaw Gomulka's Speech at the Meeting of Chairman of People's Councils, 8 pp.

POLISH, np, Trybuna Ludu, 10 Feb 1965, encl to Desp A-771, Warsaw, 25 Feb 1965.

Dept of State 4629077165

Yugoslav Daily Interviews Luigi Longo, by Nikola Lekic, 5 pp

SERBO-CROATIAN, np, Politika, 14 Mar 65, pp 1 and 2.

JPRS 29668

Czechoslovak Socialist Development Defended in

My Dag, by Ruth Majerovicova, 6 pp.

SWEDISH, np, My Dag, No 15, 16-22 Apr 65, pp. 6 and 16.

JPRS 29970

Military

Excerpts From Gunnery Manual.

Czech, rpt, pp 24-29, 74-77, 124-127.

\*ACSI 1-0701

ID 2204010205

The Development of Modern Weapons in 1965,

Part 1.

Polish, rpt, Przeglad, No 7, Jul 1965,

31-4561.

\*ACSI 1-4516

ID 2204010364

**Eastern Europe**  
**Geographic**

Preparation and Use of Relief Maps, by  
Vaclav Morca, 5 pp.  
CZECH, per, Veda a Technika Mladosti, No 25,  
November 1964, pp. 802-805  
\*ACSI I-6535  
ID 2204005565

**Sociological**

Some Economic Aspects of the Health Situation of the  
Population of Croatia, by Josip Stahan, 13 pp.  
CROATIAN, per, Ekonomski Pregled, No 11-12,  
Nov-Dec 1964, pp. 783-803.  
JPRS 30103

Establishment of the Elements of Prewedication  
in the Operations of a Carrier on Filing of a  
Claim for Application of Regulations Governing  
Unlimited Responsibility, by T. Stojcic.  
CROATIAN, per, Vazdusni Transport, pp 43-44.  
\*ACSI I-6765  
ID 2204010465

Do We Know Our Society?, by Natasa Tanaka, 5 pp.  
CZECH, np, Kulturny Zivot, Vol 20, No 14, 2 April  
1965, p 6.  
JPRS 29619

Future Development of Our Philosophy, 13 pp.  
CZECH, per, Hova Myal, No 4, Apr 65, pp. 501-507.  
JPRS 30102

History -- A Valuable Source of Knowledge and  
Education, by Josef Domansky, 11 pp.  
CZECH, per, Zivot Strany, No 3, 1965, pp. 143-147.  
JPRS 30102

Radio Problems in Czechoslovakia, 11 pp.  
CZECH, per, Zivot Strany, No 3, Mar 65, pp. 282-  
286.  
JPRS 30103

On the Status, Activity and Tasks of Czechoslovak  
Television, 13 pp.  
CZECH, per, Zivot Strany, No 3, Mar 65, pp. 287-  
291.  
JPRS 30103

Social Preferences, Economic Policy, and Economics,  
by Zoltan Keressey, 22 pp  
HUNGARIAN, per, Kozgazdasagi Szemle, No 3, Mar 65,  
pp 253-268  
JPRS 29853

**Eastern Europe**  
**Sociological (Contd)**

Poland's Population Growth Prospects Up to 1985,  
by Kazimierz Dzienio, 6 pp  
POLISH, per, Zycie Gospodarcze, No 14, 4 Apr 65,  
pp 1-6.  
JPRS 29715

A Procedure for Consolidating the Knowledge of  
Conventional Signs of Students of Grades V to  
VI, by Gh. Tascov  
RUMANIAN, per, Natura, Ser Geografie-Geologie,  
Vol XVI, No 6, pp 49-50, 1964.  
\*ACSI I-6680A  
ID 2204008365

Blood Transfusion Service in Hungary, by M. A. Umnova,  
5 pp.  
RUSSIAN, per, Problemy Gematologii i perelivaniya Krovi  
Vol 10, No 3, Mar 65, pp. 55-57.  
JPRS 30028

Higher Education in Rumania, by I. Davydov, 9 pp.  
RUSSIAN, per, Vestnik Vysshey Shkoly, No 12, 1964,  
pp 67-71.  
JPRS 29619

Disciplinary Centers for Minors, by Svetislav  
Jovanovic, 9 pp  
SERBIAN, per, Socijalna I Zdravstvena Politika,  
No 11-12, Nov-Dec 64, pp 14-20.  
JPRS 29715

Work on Eliminating Educational Retardation, by  
Zivko Sokolovski, 8 pp  
SERBIAN, per, Socijalna I Zdravstvena Politika,  
No 11-12, Nov-Dec 64, pp 35-42.  
JPRS 29715

**WESTERN EUROPE**

**Economic**

PLM (Limburg Provincial Electric Power  
Company), 1909-1959.  
DUTCH, per, Lastricht, 1959, pp 4-7, 14-16,  
18-20.  
\*ACSI I-6890  
ID 2204012665

How Far has Automation Gotten in Norway.  
FRENCH, per, Journal de la Marine Marchande,  
28 Jan 1965.  
Maritime Administration

Western Europe  
Economic (Contd)

The Fleets of Communist Countries Seem to be Intended Essentially to Handle Soviet Bloc Needs.  
FRENCH, per, Journal de la Marine Marchande, 11, 18 Feb 1965.  
Maritime Administration

The Maritime Industry is Becoming a Matter of Financing, by Leif Norgard.  
FRENCH, per, Journal de la Marine Marchande, 18 Feb 1965.  
Maritime Administration

Reduction of the Civil Defense Budget, by Ed Charret.  
FRENCH, per, Protection Civile et Industrielle, No 125, pp 33-35.  
\*ACSI 1-6747  
ID 2204010065

The Long-Term Outlook for Scientific and Technological Development in the GDR Brown Coal Industry and Its Relation to Development of Low-Cost Power, by Gebhardt and Noack, 14 pp  
GERMAN, per, Bergbautechnik, Vol 15, No 3, Mar 65, pp 114-118.  
JPRS 29716

Development of the West Berlin Harbors, by Rudolf Liebich.  
GERMAN, per, Schiff und Hafen, Vol XII, No 2, 1960, pp 197-207.  
\*ACSI 1-6546  
ID 2204003365

General Agreement for the Fisheries, 7 pp.  
NORWEGIAN, rpt, 3 Jun 1964, encl to Desp A-450, 15 Feb 1965, Oslo.  
Dept of State

Kommunist Prints Finnish Article on Cooperation Between Communists and Social Democrats, 9 pp  
RUSSIAN, per, Kommunist, No 4, Mar 65, pp 90-95.  
JPRS 29377

Political

Letter of the Communist Student's Union to the Central Committee of the French Communist Party, 5 pp  
FRENCH, per, Le Debat Communiste, No 36, 15 Mar 65, pp 14-15.  
JPRS 29521

'France Nouvelle's False Reply and Jean Dru's True Reply to the Questions of the French Communist Students' Union', by Pierre Teruel, 5 pp  
FRENCH, per, Le Debat Communiste, No 36, 15 Mar 65, pp 22-23.  
JPRS 29521

Western Europe  
Political (Contd)

French Socialists and Dissident Communists Discuss Amendola's New Labor Party Proposal, 30 pp.  
FRENCH, per, Le Debat Communiste, Vol IV, No 37, 15 Apr 65, pp. 2-20.  
JPRS 30076

French Anti-Communist Organ On Aftermath of 19-Party Moscow Talks, by Branko Lazitch, 5 pp  
FRENCH, per, Est & Ouest, No 339, 1-15 Apr 65, pp 1-4.  
JPRS 29707

French CP Stresses Party Work Among Intellectuals, by Henri Krasucki, 13 pp  
FRENCH, np, France Nouvelle, No. 1015, 31 Mar- 6 Apr 65, pp 13-15.  
JPRS 29600

UEC Leadership Urges Members to Follow 5th Congress's Line, 6 pp  
FRENCH, np, France nouvelle, No 1017, 14-20 Apr 65, pp 6-7.  
JPRS 29888

French Communists Argue for Cooperation with the Socialists and Other "Democratic Parties" to Build Socialist France, by Paul Courtier, 9 pp  
FRENCH, np, France Nouvelle, No 1017, 14-20 Apr 65, pp 3-9  
JPRS 29553

The French Communist Student Congress -- A Trotskyite View, by R. L., 6 pp.  
FRENCH, per, L'Internationale, No 32, Apr 65, pp. 4-5  
JPRS 29970

Open Letter by Franz Strobl to Austrian CP, by Franz Strobl, 10 pp.  
GERMAN, per, Rote Fahne, No 33, 1 Apr 65, pp. 1-3.  
JPRS 29970

Contributions To the Discussion Before the 19th Austrian CP Congress, by Leopold Gruenwald, Georg Breuer, Alfred Duhon, 6 pp  
GERMAN, np, Volksstimme, 3 Apr 65, pp 5-6.  
JPRS 29877

More Contributions To the Discussion Before the 19th Austrian CP Congress, by Franz Stutterecker and Wilhelm Oedlrich, 5 pp.  
GERMAN, np, Volksstimme, 22 Apr 65, 2 pp. of insert.  
JPRS 30076

The West German 'Peace Corps', by Hans Greenann, 6 pp  
GERMAN, np, Die Zeit, No 12, 19 Mar 65, p 9.  
JPRS 29558

Statutes of the Luxembourg CP, 11 pp.  
GERMAN, np, Zeitung von Letzburger Vollek, 30 Mar 65, p. 5.  
JPRS 29970

Western Europe  
Political (Contd)

Corrispondenza Socialista Examines Situation Within Greek Communism, by Georges Georgala, 6 pp  
ITALIAN, per, Corrispondenza Socialista, Vol IV, No 2, Feb 65, pp 91-94.  
JPRS 29624

The PCI: From "Dialogue" To "Single Party", by Vittorio Spinazzola, 6 pp.  
ITALIAN, per, Corrispondenza Socialista, No 3, Mar 65, pp. 121-123.  
JPRS 30076

X-Ray Examination Of the French Communist Party, by Pierre Dupont, 8 pp.  
ITALIAN, per, Corrispondenza Socialista, No 3, Mar 65, pp. 145-148.  
JPRS 30076

Excerpts From the Speech of Achille Occhetto To the National Council of the Italian Communist Youth Federation, 7 pp  
ITALIAN, np, Nouva Generazione, 13 Mar 65, p 1.  
JPRS 29624

Dahl, Bortstieber and Nordli Pose Some Problems To Be Debated At the 11th National Congress Of the Communist Party of Norway, 9 pp  
NORWEGIAN, np, Friheten, 25 Feb 65, pp 8, 10, 11  
JPRS 29624

Speech by Joergen Vogt to the Eleventh Congress of the Norwegian Communist Party, by Joergen Vogt, 13 pp  
NORWEGIAN, np, Friheten, 27 and 29 Mar 65, pp 2, 4, 3 and 4, 7 respectively  
JPRS 29333

Norwegian CP Congress Calls For Greater Democratization, 8 pp  
NORWEGIAN, np, Friheten, 2 Apr 65, pp 5 & 12.  
JPRS 29377

Vehement Atomic Debate, 7 pp.  
SWEDISH, np, Dagens Nyheter, 25 Feb 1965, p 1 and 11.  
JPRS 29592

Holmsberg and Senander Stand On Social Democratic Government Disputed By Hilding Hagberg, 6 pp.  
SWEDISH, np, Norrskens Flaman, 8 and 9 Apr 65, pp. 4, 11 and 4, 5 respectively.  
JPRS 30076

Lars Herlitz Attacks Holmsberg Theses, by Lars Herlitz, 8 pp  
SWEDISH, np, Ny Dag, No 14, 9-15 Apr 65, pp 5 & 15.  
JPRS 29877

Western Europe  
Military

The Effect of Angular Momentum in Ship Collisions, Especially With Respect to the Safety of Nuclear Powered Vessels, by C. Wolsin.  
GERMAN, per, Schiff und Hafen, Vol XIV, Jul 1962, pp 377-381.  
Maritime Administration

Group of Experts on Exterior Ballistics AC/117  
Memorandum of the French Delegation Present and Future Equipment and Procedures of the French Army in the Field of Sounding and Radio Sounding, 16 pp.  
FRENCH, rpt, February 1965.  
ID 2204011565

Technical Direction Concerning Target Ranges, 83 pp.  
FRENCH, rpt, Instruction Technique sur Les Champs de Tir, 1964.  
ACSI I-6470  
ID 2204001365-V

Concerning the Classification "Fit Pending Medical Evaluation" of Young Recruits, by J. Ougier, G. Page, 18 pp.  
FRENCH, rpt, Revue des Corps de Sante des Armees Terre Mer Air, August 1964.  
ACSI I-6627A  
ID 2204006565

Firing Tables for the 155 mm M107 Armament, Shell HE M107, Charge 7, 15 pp.  
FRENCH, rpt, Tables de Tir du Materiel de 155 mm M107, Obus HE M107, Charge 7, Jan 1965,  
ACSI I-6839  
ID 2204012065

Original Papers The Good But Under Observation Classification of Young Recruits by J. Ougier, G. Page.  
FRENCH, per, Revue Des Corps de Sante des Armees, Vol V, No 4, 1964, pp 379-419.  
\*ACSI I-6627A&B  
ID 2204006565

Combat Groups in Guerrilla Warfare, by Oliveira Cid, Miliciano Ramos Lousada.  
PORTUGUESE, per, Infantaria, Vol XXXI, No. 209-210, Sept-Oct 1964, pp 364-371.  
\*ACSI I-6869  
ID-2204012165

Combat Groups in Guerrilla Warfare, by Oliveira Cid, Miliciano Ramos Lousada.  
PORTUGUESE, per, Infantaria, No. 211-212, Nov/Dec 1964, pp 484-492.  
\*ACSI I-6870  
ID 2204012265

Western Europe  
Sociological

Working Conditions in the Merchant Marine of the Netherlands.  
FRENCH, per, Journal de la Marine Marchande, 18 Feb 1965.  
Maritime Administration

Religion and Problems Of the World Today, by Cesare Luporini, 16 pp  
ITALIAN, per, Il Contemporaneo, 27 Mar 65, pp 5 & 6  
JPRS 29377

AFRICA

Economic

The Transequatorial Communications Agency (ATAC), French, rpt, L'Agence Transequatoriale des Communications (A.T.E.C.), 12 Oct 1964.  
\*ACSI 1-0031  
10 2294003465

IFCTU Observer Diallo Urges African States To Aim Economic Planning At Human Improvement, 3 pp  
FRENCH, np, Afrique Nouvelle, No 918, 11-17 Mar 65, pp 3-9.  
JPRS 29741

Ali Mahses on the General Condition of Agriculture in the Aures, 7 pp.  
FRENCH, np, Alger Republicain, 20 Apr 65, p. 2.  
JPRS 30138

The Industrialization of Eastern Algeria, 5 pp.  
FRENCH, np, An Nasr, 2 Mar 65, p. 2.  
JPRS 30004

Problems of the Accelerated Economic Expansion of the African Nations, by Dr. J. G. Kiano, 6 pp.  
FRENCH, per, Le Commerce du Levant, Vol 5, No 56, 15 Apr 65, pp. 38-39.  
JPRS 30040

Can Africa Avoid Being Broken Up Economically?, by Francois Luchare, 5 pp  
FRENCH, per, Europe France Outre-Mer, No 420, Jan 65, pp 17 and 19.  
JPRS 29558

Employment and Under-Employment in Algeria, 18 pp.  
FRENCH, per, Information Rapide, No 5, Feb 65, pp. 2-25.  
JPRS 30138

Africa  
Economic (Conrd)

Myths and Realities Regarding the Economic Situation In Africa, 13 pp  
FRENCH, np, L'Orient, 20 Mar 65, p 12; 23 Mar, p 12; 25 Mar, p 12; and 27 Mar, p 12.  
JPRS 29741

The Economics and Industry of the Annaba Region, 17 pp.  
FRENCH, np, Le Peuple, 1 Mar 65, pp. 1-3; 2 Mar 65, p. 3; 3 Mar 65, p. 3; 5 Mar 65, p. 6; 6 Mar 65, p. 6; 9 Mar 65, p. 6; 10 Mar 65, pp. 1,6.  
JPRS 30004

Beginning of the Organ for Industrial Expansion at El Madania-El Mouradia, 5 pp.  
FRENCH, np, Le Peuple, 5 Mar 65, p. 3; 6 Mar 65, p. 6  
JPRS 30004

Aluminum Industry In Tunisia, by Louis Herman, 7 pp  
FRENCH, np, La Presse, 22-23 Mar, p 3; 24 Mar, p 3; 26 Mar 65, p 2.  
JPRS 29362

Senegal Faces the Pain of Growing Up, by Philippe Decraene, 15 pp  
FRENCH, per, Preuves, Vol 15, No 170, Apr 65, pp 43-54.  
JPRS 29777

French Aid To the Developing Countries, 7 pp.  
FRENCH, per, Problemes Economiques, No 899, 23 Mar 65, pp. 1-4.  
JPRS 30004

The Economy Of the Cape Verde Islands, by Pedro de Sousa Lobo, 15 pp  
PORTUGUESE, per, Ultramar, Vol 4, No 4, 2nd Quarter 1964, pp 75-92.  
JPRS 29741

Political

Debates Between Nasser and Executive Committee and General Secretariat Concerning New Plan of Action in Political Reorganization, 22 pp.  
ARABIC, per, at-Tali'ah, No 3, March 1964, pp 9-26.  
JPRS 29584

Senegalese Newspaper Publishes Debates on Chinese Aid to Africa, by Sim Soce. Sery Madi, and Jean-Paul Diakite, 8 pp  
FRENCH, np, Afrique Nouvelle, No 913, 4-10 Feb 65, pp 3-9; No 917, 4-10 Mar 65, p 9.  
JPRS 29741

**Africa**  
**Political (Contd)**

Social Secretariats of Africa and Madagascar For-  
Union, 3 pp  
FRENCH, np, Afrique Nouvelle, No 916, 25 Feb-3 Mar 65, pp 16 and 12  
JPRS 27741

Mali, the Malians, and African Unity, by Mohamed  
Aissaoui, 16 pp.  
FRENCH, np, Alger Republicain, 15 Feb 65, p. 7;  
16 Feb, pp. 8-7; 18 Feb, p. 7; 20 Feb, p. 7.  
JPRS 30077

President Massamba-Debat Discusses Youlou's Escape  
and Other Congolese Questions at His Press Confer-  
ence of 2 April 1965, 7 pp  
FRENCH, np, Bulletin Quotidien de l'ACI, 3 Apr 65,  
pp 1-4.  
JPRS 29977

Perugia Conference on "Africa's Presence in Tomorrow's  
World", by Jean Wolf, 14 pp.  
FRENCH, per, Civilisations, Vol 14, No 4, 1964, pp. 359-  
370.  
JPRS 29963

Socialism in Africa - Its Problems and Motivations,  
by Charles le Gros, 10 pp  
FRENCH, per, Europe France Outre-Mer, No 420, Jan 65,  
pp 40-43, 50, 52.  
JPRS 29664

Communist China and Africa in 1965, by Philippe  
Schneyder, 12 pp.  
FRENCH, per, France Eurafrigue, Vol XVII, No 161,  
Apr 65, pp. 15-20.  
JPRS 30040

The Royal Insignia of the Kouroumba of Upper Volta,  
by A. Schweeger-Hefel, 30 pp  
FRENCH, per, Journal de la Societe des Africanistes,  
Vol 32, 1962, pp 275-323.  
JPRS 27664

The Communists in North Africa, by J. F. Kahn, Louis  
Gavrier, and J. Ben Brahem, 11 pp  
FRENCH, np, Le Monde, 1 Apr 65, pp 1 and 6; 2 Apr,  
p 6; and 3 April 65, p 4.  
JPRS 29734

Revolution and Political Choices in Africa,  
5 pp.  
FRENCH, np, Octobre, No 9, 31 Mar 65, p. 4.  
JPRS 30040

**Africa**  
**Political (Contd)**

Burundese People Seen As Eventually Overcoming  
Political Abuses, by G. Bimazubute, 5 pp.  
FRENCH, per, Remarques Congolaises et Africaines,  
Vol 7, No 240, 14 Apr 65, pp. 20-23.  
JPRS 30040

African Roads to Socialism, 82 pp.  
FRENCH, per, Voies Africaines du Socialisme, 1963,  
pp. 5-47, 49, 63, 84-97, 116-136, 140, 159-162,  
172-176.  
JPRS 29979

Bandung Decennial Focuses on African-Asian Nations  
As Pivot for New Emerging Forces, 5 pp.  
INDONESIAN, np, Harian Rakjat, 25 Mar 65, p. 3.  
JPRS 30126

The Congo (Leopoldville) and the Conflicts Among  
the African States, by Romano Ledda, 6 pp.  
ITALIAN, np, Rinascita, Vol XXII, No 18, 1 May 65,  
pp. 10-11.  
JPRS 30077

Visit Of Two Russian Newspapermen To Mozambique,  
by Silva Ramalho, 15 pp  
PORTUGUESE, np, Noticias, 13 Mar, 19 Mar, 20 Mar,  
25 Mar, 26 and 28 Mar, 65.  
JPRS 29022

**Military**

Change of Grand Ceremony-New Army Commander,  
7 pp.  
FRENCH, np, Bulletin Quotidien D'Information,  
2 April 1965.  
DIA 2814004865

Decree No 233, Concerning the Status of Military  
Personnel Serving in the National Gendarmerie,  
12 pp  
FRENCH, per, Journal Officiel de la Republique du  
Dahomey, No 2, Vol 70, 15 Jan 65, pp 58-61.  
JPRS 27734

A Decree Concerning the Tunisian National Guard,  
3 pp  
FRENCH, per, Official Bulletin of the Republic of  
Tunisia, 26-30 Mar 65, pp 337-340.  
JPRS 29062

Africa  
Geography

Study of the Licungo River in Mozambique, by Manuel P. Romano, 9 pp  
PORTUGUESE, per, Boletim da Sociedade de Estudos de Mocambique, No 137, Oct-Dec 63, pp 229-236.  
JPRS 29741

Sociological

General Survey of the Mongo People in the Congo--Leopoldville, by G. Hulstaert, 50 pp.  
FRENCH, monograph, Les Mongo: Apercu General, pp. 1-66.  
JPRS 30119

Rural Promotion in Madagascar, by Albert Mollet, 24  
FRENCH, per, Developpement et Civilisations, No 21, Mar 65, pp. 10-24.  
JPRS 29940

Social Distinctions and Politico-Religious System in Traditional Bulu and Fang Society, by Henri-Marcel Bot Ba Njock, 20 pp  
FRENCH, per, Journal de la Societe des Africanistes, Vol 30, No 2, 1960, pp 151-171  
JPRS 29528

Semi-Subterranean Dwellings in West Africa, by G. le Moal, 9 pp  
FRENCH, per, Journal de la Societe des Africanistes, Vol 30, No 2, 1960, pp 193-202  
JPRS 29528

An Historical Aspect Of the Relationships Between Animism and Islam in Niger, by H. Raulin, 29 pp  
FRENCH, per, Journal de la Societe des Africanistes, Vol 32, 1962, pp 249-274  
JPRS 29664

The Situation in 1964 and Future Status of the Catholic Church in Congo (Leopoldville), Msgr Jean Jadot, 8 pp.  
FRENCH, np, La Libre Belgique, 2 Apr 65, pp 1, 5; 3-4; Apr 65, p 5.  
JPRS 29664

Data On and Analysis Of Higher Education in Madagascar, 11 pp  
FRENCH, np, Lumiere, 14 Mar 65, pp 5 and 8.  
JPRS 29773

The Cultural Element in Burundi Nationalism, by Gilles Binazubute, 6 pp  
FRENCH, per, Remarques Congolaises et Africaines, Vol 7, No 238, 17 Mar 65, pp 21-24.  
JPRS 29734

Africa  
Sociological (Contd)

Ideological Struggles Are the Obstacle To the Development of Black Africa, by J. C. Froelich, 10 pp  
FRENCH, per, Revue de Defense Nationale, Vol 21, Apr 65, pp 504-502.  
JPRS 29741

Administrative Justice In the French-Speaking States of Africa, by Pierre Lampue, 29 pp.  
FRENCH, per, Revue Juridique et Politique, Vol. 19, No 1, Jan-Mar 65, pp. 3-31.  
JPRS 30077

The Bowiri: Development Into a Nation and Self-Assertion Of the Remnants Of a Togo (Ex-British Togoland) People, by Hans W. Debrunner, 40 pp  
GERMAN, per, Anthropos, Vol 50, Fasc 3-4, 1964, pp 597-632.  
JPRS 29362

Mauritius -- Not So Exotic, by J. Botschkarow, 5 pp.  
GERMAN, np, Volksstimme, 17 Apr 65, p. 10.  
JPRS 29940

Public Health in French-Speaking West Africa, by Angela V. Borsanyi, 12 pp  
HUNGARIAN, per, Orvosi Hetilap, Vol 106, No 11, 14 Mar 65, pp 511-514.  
JPRS 29664

The Peoples, Religions and Customs of Somalia, 23 pp  
Italian, bk, Vademecum della Somalia per Ufficiali e Sottufficiali, 1949, pp 36-72.  
JPRS 29327

Religion, Society and Politics in Black Africa Before and After Independence, by Vittorio Lanternari, 51 pp.  
ITALIAN, per, Nuovi Argomenti, No 69-71, Jul-Dec 64, pp. 456-489.  
JPRS 30072

The New Criteria of Development For the Former Colonial Nations, by Feliks Gross, 5 pp  
ITALIAN, np, L'Umanita, Vol III, No 32, 31 Jan 65, p 5.  
JPRS 29741

The Individual and the Fang Society, by Augusto Panyella, 16 pp  
SPANISH, per, Archivos del Instituto de Estudios Africanos, No 46, Sep 1953, pp 51-64.  
JPRS 29578



# NORTHERN EUROPE

## Economic

Development of UAR Petroleum, by Ahmad Kamil Al-Badawi, 5 pp.  
ARABIC, np, Al-Ahram, 23 Mar 65, p 4.  
JPRS 29621

Public Works in Lebanon in 1964, by Georges T. Hadjithomas, 12 pp  
FRENCH, np, Le Commerce Du Levant, 3 Mar 65, pp 25-27  
JPRS 29526

Trade Unions in Lebanon in 1964, by Maurice Tawile, 9 pp  
FRENCH, np, Le Commerce Du Levant, 3 Mar 65, pp 42-43.  
JPRS 29526

Scientific and Technical Progress in Turkmenistan for Forty Years, by S. R. Sergiyenko, 14 pp  
RUSSIAN, per, Izvestiya Akademii Nauk Turkmenskoy SSR, Seria Fiziko-Tekhnicheskikh, Khimicheskikh, i Geologicheskikh Nauk, No 5, 1964, pp 3-11.  
JPRS 29662

# MIDDLE EAST

## Political

Iron and Steel Workers at Helwan Plants Contribute Production Gains to Abdel Nasser, by Ibrahim Rashed 8 pp.  
ARABIC, np, Akbar al-Yum, 3 Apr 65.  
JPRS 30059

Four Questions About the Socialist Union and the Political System, by Latfy al-Khul, 16 pp.  
ARABIC, per, at-Tali'a, Apr 65, pp. 55-63.  
JPRS 30059

## Middle East Sociological

A Socio-Ethnic Religious Minority: The Christians in West Pakistan, 9 pp.  
SERIAL, per, Sociologus, Vol XII, No 2, pp -127, 1962.  
ACSI I-6611B  
ID 2204006465

Some Nomadic Groups in West Pakistan and Their Adaptation to Modern Times, by Sigrid Westphal-Mellbusch, 11 pp.  
SERIAL, per, Sociologus, Vol XII, No 2, pp 113-. 1962.  
ACSI I-6611A  
ID 2204006465

# FAR EAST

## Economic

Technical Cooperation Movement in Liaoning Province Is Effective Means to Improving Technical Levels, by Shih Ming (0670 2494), 6 pp.  
CHINESE, per, Ching-chi T'ao-pao, No 913, 5 Apr 65, pp. 20-21.  
JPRS 30139

How New Corps Members Give a Good Performance, 6pp  
CHINESE, per, Chung-kuo Ch'ing-nien, No 7, 1 Apr 65, pp 16-17.  
JPRS 29697

My Experiences in Carrying Out Scientific Research Work in Basic Units in Rural Areas, by Wang Shou-ch'un (3769 1343 4783), 9 pp.  
CHINESE, per, Chung-kuo Nung-yeh K'o-hsueh, No 9, 15 Sept 64, pp. 2-7.  
JPRS 30055

Analysis of the Technical Experiences of the Wheat Experimental Farms in Peking Suburbs in 1964, by Ts'ai Hsu (5591 2485), Tseng Tao-hsiao (2582 6670 1321), Chu Ts-hui (2612 1795 6540), Wang Heng-li (3769 1854 4539), Wang Shih-chih (3769 0013 0037), Wang Chao-t'ien (3769 0340 1131), and Liu Chung-hsuan (0491 0022 1357), 23 pp.  
CHINESE, per, Chung-kuo Nung-yeh K'o-hsueh, No 9, 15 Sept 64, pp. 8-17.  
JPRS 30055

Railroads of China, by Ling Hung-hsuan, 374 pp.  
CHINESE, bk, Chung-kuo T'ieh-lu Chih, Taiwan, Mar 1963, pp 1-458.  
ACSI I-5877  
ID 2204051664-V

Far East  
Economic (Contd)

Boiling, Bleaching and Dyeing Techniques for Processing Khaki, by Wang Hua-sheng, 14 pp.  
CHINESE, per, Fang-chih Chi-shu, No 7, 27 May 64, pp 29-33.  
JPRS 29541

Pile Cloth Yarn Consumption Ratio and Density Control Methods, by Kao Fu-hsin (7559 0154 9387), 11 pp.  
CHINESE, per, Fan-chih Chi-shu, No 7, 27 July 1964, pp 45-48.  
JPRS 29610

Improvement of Ramie-Polyester Yarn, by Wang Pao-siang (3769 0202 7449), 12 pp.  
CHINESE, per, Fang-chih Chi-shu, No 8, 27 Aug 65, pp. 47-49 and 29.  
JPRS 29963

Study into the Properties of Chinese Raw Cotton, by Yen Hao-ching (0917 3493 2529), Chang Jen-kang (1728 6514 0474), Chou Chin-fang (0719 6930 5364), 25 pp.  
CHINESE, per, Fang-chih Chi-shu, No 9, 27 Sep 64, pp. 1-11.  
JPRS 30638

The Dyeing and Finishing of Bulked Yarns of Polyacrylonitrile Fibers, by Wang I-ming (3769 6654 7686), 13 pp.  
CHINESE, per, Fang-chih Chi-shu, No 9, 27 Sep 64, pp. 44-48.  
JPRS 29968

On Prevailing Difference of Views On the Principle Of Distribution According To Work, by Ch'i Ch'i-sheng (3344 3325 3932), 8 pp.  
CHINESE, per, Hsin Chien-sue, No 8/9, 20 Sept 64  
JPRS 29593

A New Thing, Experience of Szechwan Province in Popularizing the "Three Fixations, One Replacement" Labor System, by Yang Ch'ao (2799 6389 ), 14 pp.  
CHINESE, per, Hung-ch'i, No 2, 27 Feb 65, pp. 25-33.  
JPRS 30134

Agreements and Contracts Signed by Communist China's Government and Organizations with Those of Other States July 1963 Through June 1964, Listed by Country, 16 pp.  
CHINESE, per, Jen-min Shou-ts'ue, Oct. 64.  
JPRS 30038

Recent Development in China of Irrigation Using City Waste Water, by Kuo Tsu-yuan (6665 4371 3293), Yang P'ei-yuan (2799 1014 0954) and Wang Te-chin (3076 1795 2516), 20 pp.  
CHINESE, per, K'o-hsueh T'ung-pao, No 2, 1965, pp 134-141.  
JPRS 29597

Far East  
Economic (Contd)

Achievements Made in Highway Building in Fifteen Years, by Wu K'un-shan (0124 0901 1472), 5 pp.  
CHINESE, per, Kung-lu, No 10, 20 Oct 64.  
JPRS 29593

Apply Correct Working Method to Complete the Task of Boiler Registration, by Li Che-min (2621 0772 3046) and Chiang Ts'ai-shou (3068 2033 1103), 6 pp.  
CHINESE, per, Lao-tung, No 9, 13 Sep 64, pp. 14-16.  
JPRS 30124

Boiler Registration Work in Yang-chou, 6 pp.  
CHINESE, per, Lao-tung, No 9, 13 Sep 64, pp. 17-19.  
JPRS 30124

Strengthen the Work of Boiler Inspection to Insure Safe and Economic Operation, 5 pp.  
CHINESE, per, Lao-tung, No 9, 13 Sep 65, pp. 20-21.  
JPRS 30124

Fifteen Eventful Years At the Shih-Ching-Shan Iron and Steel Corporation, 6 pp.  
CHINESE, per, Lao-tung, No 10, 18 Oct 64, pp. 13-15.  
JPRS 30139

Computing the Fixed Number Of Stevedores For Inland Ports, by Ho Ch'ao-ch'un (6320 6389 5028), 7 pp.  
CHINESE, per, Lao-tung, No 11, 18 Nov 64, pp. 21-23.  
JPRS 30139

Role of Agricultural Bank in Rural Finance, 5 pp.  
CHINESE, per, Nung-ts'un Chin-jung, No 12, 12 Sept 64.  
JPRS 29593

Shanghai's Machinery and Electrical Industry Supports National Construction, by Chiang T'ao (5592 3447), 9 pp.  
CHINESE, per, Tien Shih-chieh, No 10, 1 Oct 64, pp. 361-364.  
JPRS 29937

Development of the Cable Industry in Shanghai, by Ma Shengo-mo (7456 4141 2875), 7 pp.  
CHINESE, per, Tien Shih-chieh, No 10, 1 Oct 64, pp. 376-377.  
JPRS 29937

The Development of Modern Electric Welding Equipment, by Tung Chin-yuan (5516 6930 0997), 5 pp.  
CHINESE, per, Tien Shih-chieh, No 10, 1 Oct 64, pp. 378-379.  
JPRS 29937

Work Progress On Remote Action in the Power Network, by Yeh Fu-nien (5509 4395 1628) and Lo Mou-sheng (2867 5349 3932), 5 pp.  
CHINESE, per, Tien Shih-chieh, No 10, 1 Oct 64, pp. 384-385.  
JPRS 29937

Far East  
Economic (Contd)

The Achievements of the Low-Voltage Electric Device Industry, by Hsiang Hsin (0686 7951), 6 pp.  
CHINESE, per, Tien Shih-chieh, No 10, 1 Oct 64, pp. 388-389.  
JPRS 29937

The Progress in Electrification of the Textile Industry in Shanghai, by Lu Fu-t'ang (7120 5346 1048) and Sheng Jen-wu (4141 0117 0710), 5 pp.  
CHINESE, per, Tien Shih-chieh, No 10, 1 Oct 64, pp. 390-391.  
JPRS 29937

The Achievements of Electrification in Coal Mines, 6 pp.  
CHINESE, per, Tien Shih-chieh, No 10, 1 Oct 64, pp. 392-393.  
JPRS 29937

The Wu-Ching Steam Power Plant and Its Continual Leap Forward, 6 pp.  
CHINESE, per, Tien Shih-chieh, No 10, 1 Oct 64, pp. 394-395.  
JPRS 29937

Contraction Problems in the Manufacturing of Ceramic Parts, by Chu Kuei-hung (4376 2710 3163), 11 pp.  
CHINESE, per, Wu-hsien-tien Chi-shu, No 3, 11 Sep 64, pp. 16-19, 22.  
JPRS 29968

Transportation Minister of North Vietnam Reports on Country's Transportation System, by Phan Trong Tue, 9 pp.  
GERMAN, per, OSSND Zeitschrift der Organisation fuer die Zusammenarbeit der Eisenbahnen, No 1, Vol VIII, Jan-Feb 65, pp. 1-6.  
JPRS 30062

Government and Private Agencies Concerned with Space Development in Japan, 40 pp.  
JAPANESE, bk, Koku Uchu Nenkan, 30 July 64, pp. 91-103.  
JPRS 30049

Irrigation Construction in North Korea, 1945-1950, by Sakurai Hiroshi, 24 pp.  
JAPANESE, per, Ajia Keizai, Nov 64, pp 51-59.  
JPRS 29614

The Recent Condition of the Chinese Economy and the Characteristics of China's Economic Policy, by Fukushima Yutaka, 7 pp.  
JAPANESE, per, Ajia Keizai Jumbo, No 587, 11 Sept 64, pp 1-9  
JPRS 29541

Far East  
Economic (Contd)

Monetary and Financial Operations in China, by Jin Kuwano, 6 pp.  
JAPANESE, per, Ajia Keizai Jumbo, 603, 21 Feb 65, pp. 1-6.  
JPRS 30035

Stagnancy of Foreign Trade in Underdeveloped Countries, by Noboru Kamakura, 6 pp.  
JAPANESE, per, Tonan Ajia Kenkyu, Vol 1, 1 July 1963 pp 1-94.  
JPRS 29868

Bamboo in Southeast Asia, by Koichiro Ueda, 14 pp.  
JAPANESE, per, Tonan Ajia Kenkyu, Vol I, 1 July 1963 pp 1-94.  
JPRS 29868

Agricultural Camoodia: Her Present and Future, by Takashi Sato, 14 pp.  
JAPANESE, per, Tonan Ajia Kenkyu, Vol I, 1 July 1963 pp 1-94.  
JPRS 29868

Let Us Accurately Formulate the 1965 State Budget, by So Tong-hwan, 5 pp.  
KOREAN, per, Chaejong Kuryung, No 10, 1964, 16 Oct 64, pp 2-5.  
JPRS 29999

On the Formulation Of Financial Plans In the Capital Construction Sector, by Chong Tong-chik, 5 pp.  
KOREAN, per, Chaejong Kuryung, No 10, 1964, 16 Oct 64, pp 12-14.  
JPRS 29999

Searching For Savings in Industrial Buildings, by Hong Tong-chun, 5 pp.  
KOREAN, per, Chaejong Kuryung, No 10, 16 Oct 64, pp 15-17.  
JPRS 29999

State Budget Planning, 7 pp.  
KOREAN, per, Chaejong Kuryung, No 10, 16 Oct 64, pp 18-22.  
JPRS 29999

For Further Development In the Construction Field, 5 pp.  
KOREAN, per, Konch'uk kwa Konsol, Dec 64, pp 2-4.  
JPRS 29999

For New Reforms In the Forest Industry, by Kim Tong-hun, 6 pp.  
KOREAN, per, Kulloja, No 22, 20 Nov 64, pp 22-27.  
JPRS 29999

Far East  
Economic (Contd)

Specialization and Intensification of Animal Husbandry, by Cho Sung-un, 9 pp  
KOREAN, per, Kulloja, No 23, 5 Dec 64, pp 23-34.  
JPRS 29397

A Decisive Leap In Accomplishing the Seven Year Plan, 5 pp  
KOREAN, per, Kulloja, No 24, 20 Dec 64, pp 2-5.  
JPRS 29399

The Role Of Commerce In the Economic Relationship Between City and Farm-Village, by Chong Hyok-nam, 11 pp  
KOREAN, per, Kulloja, Vol 24, 20 Dec 64, pp 16-22.  
JPRS 29399

The Need Of Thorough Preparation For Production, by Hwang Kum-t'ae, 6 pp  
KOREAN, per, Kyongche Chisik, Dec 64, pp 1-5.  
JPRS 29399

The Ten Great Tasks as the Main Link in the Fulfillment of the Seven-Year Plan, by Sin On-gap and Hong Kwan-je, 8 pp.  
KOREAN, np, Minju Choson, 3 Dec 1964, pp 2-3.  
JPRS 29647

Grain Production, by Kim Chang-dok, 7 pp  
KOREAN, np, Minju Choson, 19 Feb 65, p 2.  
JPRS 29614

Specialization in Livestock Industry, by Cho Hung-Yong, 5 pp  
KOREAN, np, Minju Choson, 20 Feb 65, p 2.  
JPRS 29614

1965 Technological Development Plan, 8 pp  
KOREAN, np, Minju Choson, 21 Feb 65, p 2; 23 Feb 65, p 2.  
JPRS 29614

Basic Methods Of Carrying Out This Year's Economic Plan, by Ch'oe Ch'ol, 6 pp  
KOREAN, np, Minju Choson, 24 Feb 65, p 2.  
JPRS 29614

Technical Innovation Movement in Local Industrial Sectors, by Kang Chung-han, 5 pp.  
KOREAN, np, Nodong Sinmun, 26 Nov 1964, p 2.  
JPRS 29647

Establish Thoroughly Inspection and Maintenance System of Communication Equipment and Facilities, by Pak Yong-sun, 5 pp.  
KOREAN, np, Nodong Sinmun, 6 Dec 1964, p 2.  
JPRS 29647

Far East  
Economic (Contd)

Index Plan Fulfillment and Good-In-Kind Evaluation System: Experiences Of the Taean Electrical Equipment Plant, by Kim Pyong-nin, 5 pp  
KOREAN, np, Nodong Sinmun, 13 Jan 65, p 2.  
JPRS 29399

Technical Guidance for Agricultural Production, by Pak Kon, 5 pp  
KOREAN, np, Nodong Sinmun, 14 Jan 65, p 2.  
JPRS 29399

For Enhancing the Utilization Rate of Forestry Machinery, by Chong Tong-Ch'ol, 5 pp  
KOREAN, np, Nodong Sinmun, Vol 19, 19 Jan 65, p 2.  
JPRS 29399

Let Us Train More and Better Farm Technicians, by Han Song-ton, 6 pp  
KOREAN, np, Nodong Sinmun, 20 Jan 65, p 2.  
JPRS 29399

Let Us Concentrate Our Efforts On the Development of Our Steel Industry, 5 pp  
KOREAN, np, Nodong Sinmun, 18 Feb 65, p 1.  
JPRS 29750

Let Us Revolutionize the Farms By Mechanizing Them, 5 pp.  
KOREAN, np, Nodong Sinmun, 19 Feb 65, p. 1.  
JPRS 29962

Theses on Rural Communities, by Yi Song-ju, 8 pp  
KOREAN, np, Nodong Sinmun, 26 Feb 65, p 2.  
JPRS 29698

Labor Administration, by Sok Jun-hak and Kim Ki-ryong, 6 pp  
KOREAN, np, Nodong Sinmun, 28 Feb 65, pp 2-3.  
JPRS 29698

Economic Knowledge: Planning Standards for Consumption of Goods in 1966, 6 pp  
KOREAN, np, Nodong Sinmun, 3 Mar 65, p 6 and 5 Mar 65, p 6.  
JPRS 29672

The Seventh Conference of the Central Council of the MPR Trade Unions, 22 pp  
MONGOLIAN, per, Hodolmor, 27 Mar 65, pp 1-4.  
JPRS 29759

Industrial Training Tasks, by P. Demberel, 6 pp.  
MONGOLIAN, per, Sargan xumujulegc, 1964, No 4, pp. 59-63.  
JPRS 30071

Far East  
Economic (Contd)

Manufacture and Export of Japanese Drugs, by Ye. N. Vovodov, 6 pp.  
RUSSIAN, per, Meditinskaya Promyshlennost' 888R,  
No 3, Mar 65, pp. 58-61.  
JPRS 30025

Primary Directions of Ferrous Metallurgy Development  
in Central Asia, by Yu. O. Alferov, 6 pp.  
RUSSIAN, per, Obshchestvennyye Nauki v Uzbekistane,  
No 8-9, 1964, pp. 92-96.  
JPRS 29920

Goods and Marketing in North Vietnam Today, by Ho  
Lich, 13 pp.  
VIETNAMESE, per, Hoc Tap, No 2, pp 47-53.  
JPRS 29595

Overcoming Erroneous Viewpoints and Understanding  
the Party's Way of Increasing Production in the  
Fish Industry, by Tran Quan Hop, 10 pp.  
VIETNAMESE, per, Hoc Tap, No. 2, pp 54-58.  
JPRS 29595

A Discussion on Industrial Zoning in the North,  
by Le Loc, 8 pp.  
VIETNAMESE, per, Hoc Tap, No. 2, 1965, pp 59-64.  
JPRS 29595

Improving Our Leadership in the Organization and  
Guidance of Plan Implementation, and Striving To  
Achieve the First Five-Year Plan, by Nguyen Duy Trinh,  
14 pp  
VIETNAMESE, per, Hoc Tap, Mar 65, pp 10-14.  
JPRS 29770

Banking Must Serve Socialist Industrialization,  
by Pham Hung, 33 pp  
VIETNAMESE, per, Hoc Tap, Mar 65, pp 15-24.  
JPRS 29770

Deep Plowing Increases Thanh Hoa's Agricultural  
Production, by Ngo Thuyen, 8 pp  
VIETNAMESE, per, Hoc Tap, No 3, Mar 65, pp 46-50.  
JPRS 29770

Provisional Regulations Concerning Labor Protection,  
13 pp.  
VIETNAMESE, np, Lao Dong, 2 Jan 65, p. 3.  
JPRS 30061

Unions To Help Raise Quality of Constructions,  
by Nguyen Tam Ngo, 5 pp  
VIETNAMESE, np, Lao Dong, 9 Mar 65, p 2.  
JPRS 29701

Far East  
Economic (Contd)

Minister of Light Industry On Improved Product  
Quality, by Kha Vang Can, 5 pp  
VIETNAMESE, np, Nhan Dan, No 3925, 20 Dec 64, p 3.  
JPRS 29777

Credit Operations Serve Movement of Lowland Compatriots  
Who Participate in Economic and Cultural Development of  
Mountain Areas, by Ta Hoang Co, 5 pp.  
VIETNAMESE, np, Nhan Dan, No 3936, 9 Jan 65, p. 2.  
JPRS 30062

Electricity In the Service of Agriculture, by Pham Khai  
and Ngo Du, 6 pp.  
VIETNAMESE, np, Nhan Dan, 12 Jan 65, p. 2.  
JPRS 30062

Implementation of the Party's Price Policy for a Perfect  
Price System in an Independent Economy and for Self-  
Transformation into Socialism (Three Part), by Doan  
Trong Truyen, 20 pp.  
VIETNAMESE, np, Nhan Dan, 22 Jan 65, No 3949, pp 2-3.  
JPRS 30061

Ha Bac Has Made Progress, by Pham Van Guyen, 6 pp  
VIETNAMESE, np, Nhan Dan, No 3996, 12 Mar 65, p 2.  
JPRS 29777

Let Us Consolidate and Enlarge the Unified Socialist  
Market, by Nguyen Van Dao, 6 pp  
VIETNAMESE, np, Nhan Dan, 22 Mar 65, p. 2.  
JPRS 29701

Intensive Rice Cultivation, 23 pp  
VIETNAMESE, np, Nhan Dan, 29-30 Mar 65, p 2.  
JPRS 29972

Direction for Rural Build Up, by Hoang Nhu Tiep, 5 pp.  
VIETNAMESE, np, Nhan Dan, 3 Apr 65, p. 6.  
JPRS 29969

Nghia Hung District to Raise Rice Yield by 20  
Percent, by Hoang Viet, 11 pp.  
VIETNAMESE, np, Nhan Dan, 4 Apr 65, p.2.  
JPRS 29969

Technical Revolution Needed to Increase Rice  
Productivity, by Nghien Quy Ngai, 10 pp.  
VIETNAMESE, np, Nhan Dan, 5 Apr 65, p. 2.  
JPRS 29969

Intensive Cultivation of Rice in Dan Phuong Township,  
by Le Trung Hung, 5 pp.  
VIETNAMESE, np, Nhan Dan, No 4023, 8 Apr 65, p. 2.  
JPRS 29969

Far East  
Economic (Contd)

Discussions Concerning Intensive Cultivation Of Rice, by Hoang Van Thoai, 5 pp  
VIETNAMESE, np, Nhan Dan, 9 Apr 65, p 2,  
JPRS 29372

Area Plan Overfulfilled in Soc Tay Small Irrigation Works in Nghe An and Tuyen Quang, 5 pp.  
VIETNAMESE, np, Nhan Dan, 18 Apr 65, p. 2.  
JPRS 30042

Discussions Concerning Intensive Cultivation of Rice, by Hoang Huu Nhon, 5 pp.  
VIETNAMESE, np, Nhan Dan, 22 Apr 65, p. 2.  
JPRS 30092

Political

Publication of Volume Four Of the Selected Works Of Mao Tse-Tung in Albania, by Kristaq Prifti, 13 pp  
ALBANIAN, per, Rruga e Partise, No 1, Jan 65,  
pp 63-74.  
JPRS 29624

Raise High the Revolutionary Banner of the Thought of Mao Tse-tung, Resolutely Consolidate the Dictatorship of the Proletariat, by Lu Tun (7627 6868), 8 pp.  
CHINESE, per, Cheng-fa Yen-chiu, No 4, 18 Nov 64,  
pp. 1-5.  
JPRS 29931

Expose and Criticize the Imperialists' Erroneous Theory on the Question of State Sovereignty, by Yang Hsin (2799 2946) and Ch'en Chien (7115 0256), 10 pp.  
CHINESE, per, Cheng-fa Yen-chiu, No 4, 18 Nov 64,  
pp. 6-11.  
JPRS 29931

Fully Develop the Role of People's Mediation Work in Serving Socialism, by Ye Ku-lin (0673 6253 7207) 9 pp.  
CHINESE, per, Cheng-fa Yen-chiu, No 4, 18 Nov 64,  
pp. 12-17.  
JPRS 29931

Usher In New High Tide of Socialist Revolution and Socialist Construction, by Fang Fang (2455 2455). 8 pp  
CHINESE, per, Ch'iao-wu Pao, No 1, Feb 65, pp 4-6.  
JPRS 29697

The Red Lamp, by Weng Ou-hung (5040 0260 5725) and A Chia (7093 3946), 6 pp.  
CHINESE, per, Shing Ch'i, No 2, 27 Feb 65, pp. 34-55.  
JPRS 30134

Far East  
Political (Contd)

Diplomatic Representatives Exchanged between Communist China and Other States, 5 pp.  
CHINESE, per, Jen-min Shou-ts'e, Oct 64,  
JPRS 30038

Communist Youth Corps Members Should Become Revolutionary Fighters in Name and in Fact, 5 pp  
CHINESE, per, Nung-ts'un Ch'ing-nien, No 2, 1 Feb 65,  
pp 21-23.  
JPRS 29697

Grasp Live Thinking and Improve Teaching of Courses In Politics, 6 pp  
CHINESE, per, Shanghai Chiao-yu, No 12, 12 Dec 64,  
pp 7-9.  
JPRS 29697

Peking Checked in Burundi, by Nicholas Lang, 7 pp.  
FRENCH, per, France Surafrigue, Vol XVII, No 161,  
Apr 65, pp. 11-14.  
JPRS 30040

Continuity and Discontinuity of Politics in Thailand, by Toru Yano, 18 pp.  
JAPANESE, per, Tonan Ajia Kenkyu, Vol 1, 1 July 1963,  
pp 1-94.  
JPRS 29868

What is the Area Study?, by Takeshi Motooka, 17 pp.  
JAPANESE, per, Tonan Ajia Kenkyu, Vol 1, 1 July 1963,  
pp 1-94.  
JPRS 29868

Socialistic Patriotism and Historical Education, 6 pp  
KOREAN, per, Kulloja, No 22, 20 Nov 64, pp 2-8  
JPRS 29900

The Duty of Youth in the Execution of the Ten Great Tasks, by Hong Sun-gwon, 6 pp  
KOREAN, per, Kulloja, No 22, 20 Nov 64, pp 9-14.  
JPRS 29900

Let Us Increase the Leadership of Party Organizations, by Kim Kil-hyon, 6 pp  
KOREAN, per, Kulloja, No 22, 20 Nov 64, pp 15-21.  
JPRS 29900

Valuable Information for the Study of the Revolutionary Tradition - On the Lives and Activities of Our Revolutionary Predecessors, by Ch'oe Won-gun, 6 pp  
KOREAN, per, Kulloja, No 22, 20 Nov 64, pp 42-48.  
JPRS 29900

For the Development of Physical Training on the Mass Level, by Kim Ki-su, 11 pp  
KOREAN, per, Kulloja, No 23, 5 Dec 64, pp 13-21.  
JPRS 29900

**Far East  
Political (Contd)**

Revolutionary Moral and Cultural Improvement for Cadre and Emphasis On Party Life, by Chong Il, 11 pp  
KOREAN, per, Kulloja, No 24, 20 Dec 64, pp 6-15.  
JPRS 29900

Let Us Further Strengthen the Revolutionary Spirit In All Units and Places, by Chon T'ae-song, 7 pp  
KOREAN, np, Minju Choson, 19 Jan 65, pp 2-3.  
JPRS 29900

Comprehensive Implementation of Ch'ongsanni Spirit and Method, by Kim Ui-sik, 5 pp  
KOREAN, np, Minju Choson, 10 Feb 65, pp 2-3.  
JPRS 29725

Application of Ch'ongsan-Ni Spirit and Method, 5 pp.  
KOREAN, np, Minju Choson, 17 Feb 1965, p 1.  
JPRS 29609

The First Bourgeois Reform Movement in our Country for Enlightened Thought and the Kapsin Political Incident, by Kim Yong-suk, 5 pp.  
KOREAN, np, Nodong Sinmun, 5 Dec 1964, p 4.  
JPRS 29648

Let Us Intensify the Ch'ollima Work Group Movement, by Kim Wal-yong, 6 pp.  
KOREAN, np, Nodong Sinmun, 10 Feb 1965, p 2.  
JPRS 29609

Training of Party Members, by Yi Jong-sol and Chu Sang-duk, 6 pp  
KOREAN, np, Nodong Sinmun, 2 Mar 65, pp 2 and 3.  
JPRS 29725

Party Spirit Must Be Expressed In Work, by Pak Cong-taek, 10 pp  
KOREAN, np, Nodong Sinmun, 7 Mar 65, pp 2-3.  
JPRS 29748

The Women of Our Country Are Confident Workers for Socialist Construction, 5 pp  
KOREAN, np, Nodong Sinmun, 8 Mar 65, p 1.  
JPRS 29743

Political Work To Arouse the Masses in Patriotic Movement, by Yi Sang-jun, 6 pp  
KOREAN, np, Nodong Sinmun, 4 March 65, p 2.  
JPRS 29748

The Account of the Struggle of a True Communist, Concerning the "Life and Activities of Comrade Lee Che-sun", by Kang Do'k-so', 5 pp  
KOREAN, np, Nodong Sinmun, 10 Mar 65, p 2.  
JPRS 29748

**Far East  
Political (Contd)**

Tireless Champions of Communism, Devoted To the Revolution, 8 pp  
KOREAN, np, Nodong Sinmun, 10 Mar 65, p 2.  
JPRS 29743

To Strengthen the Party's Leadership and Guidance Role and Its Dynamic Capabilities, 5 pp.  
MONGOLIAN, per, Namyn Am'dral, No 2, Feb 65, pp. 3-7.  
JPRS 30048

The Role of the Workers' and Communist Movement in the Birth of the MPRP, by H. Dzandraabal, 5 pp.  
MONGOLIAN, per, Namyn Am'dral, No 2, Feb 65, pp. 16-20  
JPRS 30048

The MPRP Is the Leader and Organizer of Socialist Competition, 8 pp.  
MONGOLIAN, per, Namyn Am'dral, No 2, Feb 65, pp. 25-31.  
JPRS 30048

A Need for Joint Discussions and Correct Solutions, 5 pp.  
MONGOLIAN, per, Namyn Am'dral, No 2, Feb 65, pp. 63-66.  
JPRS 30048

Let Us Improve the Indoctrinative Function of Every Subject, 8 pp.  
MONGOLIAN, per, Surgan xumuijuileg, 1964, No 4, pp. 3-9.  
JPRS 30071

Raising the Ideological Content and Teaching Method of the History Course, by B. Liguu, 22 pp.  
MONGOLIAN, per, Surgan xumuijuileg, 1964, No 4, pp. 10-25.  
JPRS 30071

Faith and Determination in Fulfillment of 1965 Plan, by Vu Quoc Tuan, 6 pp.  
VIETNAMESE, np, Doc Lap, 1 Apr 65, p. 4.  
JPRS 30022

Raise the Consciousness of Discipline and Organization, Strengthen Unity and Increase the Combat Readiness of the Party, by Nguyen Luong Sang, 15 pp.  
VIETNAMESE, per, Hoc Tap, No 2, Feb 1965, pp 18-25.  
JPRS 29595

35 Years of Brave and Gloriously Successful Struggle, by Hong Chuong, 16 pp.  
VIETNAMESE, per, Hoc Tap, No 2, Feb 1965, pp 36-44.  
JPRS 29595

Far East  
Political (Contd)

Continuing the Socialist Reform, by Pham Van Dong, 9  
VIETNAMESE, per, Hoc Tap, No 3, Mar 65, pp 1-5.  
JPRS 29770

Women and the Revolution, by Nguyen Thi Thap, 9 pp  
VIETNAMESE, per, Hoc Tap, No 3, Mar 65, pp 25-30.  
JPRS 29770

Strengthen the Socialist Education of Cadres, Party  
Members, and the Masses, by Nguyen Lam, 14 pp  
VIETNAMESE, per, Hoc Tap, No 3, Mar 65, pp 31-38.  
JPRS 29770

Raise High the Standard of Patriotism and Socialism  
In an Effort to Build an Independent and Autonomous  
Economy, by Le Trung Viet, 11 pp  
VIETNAMESE, per, Hoc Tap, No. 3, Mar 65, pp 39-45.  
JPRS 29770

A Highland "Four Good" Party Chapter Committee in  
Thong Nhat Village, by Bui Tho Chuyen, 6 pp  
VIETNAMESE, per, Hoc Tap, Mar 65, pp 69-72.  
JPRS 29770

Mau Khe Committee Did Good Irrigation Leadership  
Work, by Le Tai, 6 pp  
VIETNAMESE, per, Hoc Tap, Mar 65, pp 72-76,  
JPRS 29770

Some Experiences of the Party Chapter Committee at  
Lang Vong, by Le Trieu, 6 pp  
VIETNAMESE, per, Hoc Tap, Mar 65, pp 76-79  
JPRS 29770

Political Education in the Schools and the Role of  
the Teacher, by Nguyen Khanh Toan, 10 pp.  
VIETNAMESE, np, Nguc Gioi Vien Nhan Dan, 11 Feb 65,  
pp. 1 and 6.  
JPRS 30022

Understand the Methods of the Party, Exploit the  
Revolutionary Spirit of the Masses, Achieve New  
Success in 1965, by Nguyen Duy Trinh, 20 pp  
VIETNAMESE, np, Nhan Dan, No 322, 2 Jan 65,  
pp 1, 2, 3.  
JPRS 29778

19 March, Anniversary of the Uprising Against America  
by Dr. Pham Ngoc Thach, 7 pp.  
VIETNAMESE, np, Nhan Dan, 19 Mar 1965, p 3.  
JPRS 29625

Pham Van Bach Calls For Building and Defending North  
and Returning to South To Fight Enemy, by Pham Van  
Bach, 7 pp  
VIETNAMESE, np, Nhan Dan, 30 Mar 65, p 3.  
JPRS 29814

The Truth About Vietnam, 5 pp.  
VIETNAMESE, np, Nhan Dan, 20 Apr 65, p. 4.  
JPRS 30047

Far East  
Political (Contd)

Full Support of Anti-American and National Salvation  
Policy Asserted by Vietnam Democratic and Socialist  
Parties, 5 pp.  
VIETNAMESE, np, Nhan Dan, 25 Apr 65, p. 3.  
JPRS 30120

Educating and Training Party Members in Our Army,  
by Pham Ngoc Mau, 12 pp.  
VIETNAMESE, np, Quan Doi Nhan Dan, 11 Mar 1965,  
p 1.  
JPRS 29625

The Recent Victories and Their Significance, by  
Pham Ngoc Mau, 7 pp.  
VIETNAMESE, np, Quan Doi Nhan Dan, 20 Mar 65, p. 3.  
JPRS 29945

President Ho's Recommendation, by Nguyen Quyet, 5 pp.  
VIETNAMESE, np, Quan Doi Nhan Dan, 1 Apr 65, p. 3.  
JPRS 29945

Making Great Changes in Ideology, Organization and  
Attitude to Completely Fulfill Every Obligation of  
the Struggle, by Major General Song Hao, 10 pp.  
VIETNAMESE, np, Quan Doi Nhan Dan, 17 Apr 65, p. 1.  
JPRS 30137

Le Duc Tho Talks to Labor Youth Group in State  
Science Commission, by Le Duc Tho, 16 pp.  
VIETNAMESE, np, Tien Phong, 17 and 19 Mar 65, p. 3.  
JPRS 30022

We Are Ready To Go Back To the South To Save Our  
Native Land!, by Prof. Pham Huy Thong, 6 pp.  
VIETNAMESE, np, Tien Phong, 4 Apr 65, p. 3.  
JPRS 30022

Vietnamese Youths Pledge To Make Sacrifices To Fight  
the United States, by Vu Quang, 5 pp.  
VIETNAMESE, np, Tien Phong, 10 Apr 65, p. 3.  
JPRS 30120

Comrade Phuc's Baptism Under Fire, by Chuong Quy  
Loc, 13 pp  
VIETNAMESE, per, Van Hiep Quan Doi, Feb 65, pp 24-31.  
JPRS 29755



Far East  
Military

Some Problems in Combat Training Work, by Vuong Thua Vu and Tran Do, 10 pp  
VIETNAMESE, np, Quan Doi Nhan Dan, 16-18 Mar 65, pp 1 and 2 and 2 respectively.  
JPRS 29785

Grasping Party Military Doctrine in Combat Training, by Hoang Phuong, 7 pp  
VIETNAMESE, np, Quan Doi Nhan Dan, 23 Mar 65, p 2.  
JPRS 29076

The Self-Defense Forces Everywhere Prepare to Fight, 5 pp  
VIETNAMESE, np, Quan Doi Nhan Dan, 27 Mar 65, p 2.  
JPRS 29765

List of Candidates for Hanoi People's Council Session 3, 11 pp.  
VIETNAMESE, np, Thu Do Ha Noi, 6 Apr 65, p. 4.  
JPRS 29975

Geographic

Canals of China, 94 pp.  
JAPANESE, bk, Ajia no Yume, Oct 63.  
JPRS 30079

Sociological

Health Minister Reports on Minorities' Health, by Li Te-ch'uan, 5 pp  
CHINESE, per, Min-tsu T'uan-chieh, No 10, Oct 64,  
JPRS 29529

News Briefs on Countrywide Use of Common Dialect, 9 pp  
CHINESE, per, Wen-tsu Kai-ke, No 11, 12 Nov 64,  
JPRS 29529

Lukman Talks on Further Developments of the Veteran's Legion, by M. S. Lukman, 6 pp.  
INDONESIAN, np, Harian Rakyat, 26 Mar 65, pp. 1 and 3.  
JPRS 30126

Notes on a Recent Visit to the United States, by Iichi Sagara, 9 pp.  
JAPANESE, per, Tonan Ajia Kenkyu, Vol 1, 1 July 1965, pp 1-94.  
JPRS 29868

Far East  
Sociological (Contd)

News From the Center for Southeast Asia Studies at Kyoto University, 14 pp.  
JAPANESE, per, Tonan Ajia Kenkyu, Vol 1, 1 July 1965, pp 1-94.  
JPRS 29868

Report on Southeast Asia Studies in Foreign Countries by Usui Jisho, Motooka Takeshi, et al., 15 pp.  
JAPANESE, per, Tonan Ajia Kenkyu, Vol 1, 1 July 1965, pp 1-94.  
JPRS 29868

The Islamic Calendar and Notes on Annual Events, by Mitsukuni Yoshida, 7 pp.  
JAPANESE, per, Tonan Ajia Kenkyu, Vol 1, 1 July 1965, pp 1-94.  
JPRS 29868

Concentration on Creating Revolutionary Works of Art, 11 pp  
KOREAN, per, Kulloja, No 23, 5 Dec 64, pp 2-12.  
JPRS 29900

State Assistance to Rural Areas, by Kim Chi-song, 7 pp.  
KOREAN, np, Minju Chosen, 26 Feb 1965, p 2.  
JPRS 29648

Achievements Under the Theses on Rural Communities, 9 pp.  
KOREAN, np, Modong Siman, 25 Feb 1965, p 1.  
JPRS 29648

Development of the Rural Economy Under Theses on Rural Communities, by Kang Ch'on-in, 7 pp.  
KOREAN, np, Modong Siman, 25 Feb 1965, p 2.  
JPRS 29648

Let Us Actively Propagate Practical Methods in Teaching the Russian Language, by O. Ochirbat, 20 pp  
MONGOLIAN, per, Sargas Murnuulleg, 1964, No 4, pp. 26-43.  
JPRS 30071

A Sample Teaching Plan for the Social Sciences, by B. Sanbuu, 15 pp.  
MONGOLIAN, per, Sargas Murnuulleg, 1964, No 4, pp. 44-53.  
JPRS 30071

Imparting an Ideological-Political Education to the Students, by Sh. Chultenjants, 5 pp.  
MONGOLIAN, per, Sargas Murnuulleg, 1964, No 4, pp. 54-58.  
JPRS 30071

Far East  
Sociological (Contd)

Imparting A Collectivist Education to the Students,  
by Ts. Lantuu, 5 pp.  
MONGOLIAN, per, Surgan xumuu, juulegc, 1964, No 4,  
pp. 68-71.  
JPRS 30071

Recognition and Correct Solution to the Religious  
Problem, by Nguyen Nhat, 14 pp  
VIETNAMESE, per, Hoc Tap, No 3, Mar 65, pp 59-66  
JPRS 29770

World View and Its Role in Artistic Creativity,  
by Xuan Truong, 11 pp.  
VIETNAMESE, per, Hoc Tap, Feb 1965, pp 65-73.  
JPRS 29595

Warm Praise for Vietnamese Women Who Fulfill  
Responsibilities Toward Their Country and Their  
Family, by Le Quang Hoa, 5 pp.  
VIETNAMESE, np, Quan Doi Nhan Dan, 15 Apr 65, p. 4.  
JPRS 30120

Firmer Proletarian Stand in Arts and Letters, by  
To Huu, 33 pp  
VIETNAMESE, per, Tap Chi Van Hoc, Nov 64, pp 1-34.  
JPRS 29755

LATIN AMERICA

Economic

A Venezuelan Comment on Cuba's Economy, by Agustin  
Temargo, 5 pp.  
SPANISH, np, Bohemia, 28 Mar 65, pp. 40, 41 and 45.  
JPRS 30054

Comments and Analyses On Cuba's Harvest, by Jose  
Vazquez and Federico Cobas, 3 pp  
SPANISH, per, Cuba, Feb 65, pp 4, 6, 7, 9 and 10.  
JPRS 29703

Problems Presented to Industry by A Harvest of Ten  
Million Tons of Sugar, Orlando Borrego Diaz, 26 pp.  
SPANISH, per, Cuba Socialista, Vol XI, No 44, Apr 65,  
pp. 10-30.  
JPRS 30135

Latin America  
Economic (Contd)

Economic Notes: Seaports, Essential Link in Our  
Economy, 14 pp.  
SPANISH, per, Cuba Socialista, Vol V XI, No 44,  
Apr 65, pp. 124-133.  
JPRS 30135

Accords Of the Camaguey Province Plenary Meeting of  
PURSC On the Cane Harvest and the Economy, 3 pp  
SPANISH, np, Hoy, 19 Mar 65, p 2.  
JPRS 29703

La Tarde Describes Visit to Soap Factory, by  
Thelvia Marin, 5 pp  
SPANISH, np, La Tarde, 23 Mar 65, p 6.  
JPRS 29315

Political

Certain Aspects of the Development of Class  
Struggle in Cuba, by Blas Roca, 19 pp.  
SPANISH, per, Cuba Socialista, Vol VKI, No 44,  
Apr 65, pp. 31-44.  
JPRS 30135

The Work of the Communist Youth Union in the Field,  
by Victor Gonzalez, 27 pp.  
SPANISH, per, Cuba Socialista, Vol V XI, No 44,  
Apr 65, pp. 45-63.  
JPRS 30135

Resolution No 60, 6 pp  
SPANISH, np, Hoy, 27 Mar 65, p 4.  
JPRS 29315

First Secretary of Uruguayan CP Speaks On Unity In  
Communist Movement, by Rodney Arismendi, 42 pp.  
SPANISH, np, El Popular, 9 Apr 65, 8-page insert  
between pp. 6 and 7.  
JPRS 30076

Latin America  
Military

The Role of the Party in the Armed Forces,  
by Luis Pavon, 7 pp  
SPANISH, per, Verde Olivo, 31 Dec 64, pp 6-8, 81.  
JPRS 29561

Sociological

Le Monde Correspondence: The Situation of the  
Catholic Church in Cuba, by Monsig. Eduardo Bosa  
Masvidal, 5 pp.  
FRENCH, np, Le Monde, Apr 21, 64, p. 4.  
JPRS 30054

The Population of Cuba, by Juan Perez de la Riva,  
17 pp  
SPANISH, rpt, La Poblacion de Cuba, 1964, 17 p  
JPRS 29703

Communique of the National Education Council,  
13 pp  
SPANISH, np, Hoy, 16 Feb 65, p 3.  
JPRS 29561

## SCIENTIFIC

### Aerospace

Thermal Noise of Measuring Devices and Limits of Precision of Autonomous Control System of Space Vehicle, by A. A. Krasovskiy.  
RUSSIAN, bk, pp 1-23.  
\*FTD-MT-65-130

Experimental Prognoses of Aircraft Bumpiness by a Defined Richardson Criterion, by M. V. Zavarina, M. Z. Yemel'yanova, 10 pp.  
RUSSIAN, rpt, Materialy Nauchnoy Konferentsii po Aviatsionnoy Meteorologii, 1963, pp 53-58. 9696781  
\*FTD-TT-64-1032

Aircraft In-Flight Heating, by L. G. Raykov, 117 pp.  
RUSSIAN, bk, Nagrev Letatel'nykh Apparatov v Polete, Moscow, 1962, pp 1-100. 9696519  
\*FTD-MT-64-269

Rendezvous Problem of Space Vehicle With Orbital Station, by C. Yu. Dankov, F. A. Mikhaylov.  
RUSSIAN, rpt, Nekotoryye Voprosy Sblizheniya s Orbital' Noy Stantsiyey, 1965, pp 1-13.  
\*FTD-MT-65-121

Some Problems of Three Dimensional Stabilization of a Space Vehicle, by R. V. Studnev.  
RUSSIAN, rpt, Nekotoryye Zadachi Optimal'nogo Upravleniya Prostranstvennym Dvizheniyem Kosmicheskikh Letatel'nykh Apparatov, 1965, pp 1-24.  
\*FTD-MT-65-120

Problem of Re-entry of Winged Vehicle Under the Nonlinear Control, by V. S. Vedrov, G. P. Vladichin, et al.  
RUSSIAN, bk, O Nekotorykh Nelinevnykh Zakonakh Upravleniya Kosmicheskimi Planiruyushchimi Krylaya Apparatom Pri Vyvedenii s Krugovoy Orbitsy na Vzletno-Pasadchnuyu Polosu, pp 1-26.  
\*FTD-MT-65-127

A Class System of Control for Satellites, by V. A. Bodner, K. B. Alekseyev, et al.  
RUSSIAN, rpt, Ob Odnom Klasse Sistem Upravleniya Oriyentatsiyey i Kussstvennykh Spunichov Zemli, 1965, pp 1-29.  
\*FTD-MT-65-119

Review of the Theory of Optimal Guidance of Space Vehicles, by N. N. Moiseyeva, V. N. Lebedeva.  
RUSSIAN, bk, Obzor Rabot, Vypolnennykh V Vychislitel'nom Dentre An SSSR, Po Teorii Optimal'nykh Upravleniy Kosmicheskimi Apparazami, pp 1-33.  
\*FTD-MT-65-123

## Scientific Aerospace (Contd)

Determination of Space Vehicle Orbits With Automatically Measuring Systems, by E. L. Akin, M. D. Kislik, et al.  
RUSSIAN, rpt, Opredeleniye Orbit Kosmicheskikh Ob Yektov s Pomoshch' Yu Avtomatizirovannogo Izmeritel'nogo Komplekss, 1965, pp 1-8.  
\*FTD-MT-65-122

Optimal Corrections of Space Vehicle Movement in Gravitational Field vy V. V. Tokarev.  
RUSSIAN, bk, Optimal'naya Programma Korrektsii V Zadache O Dviznenii V Gravitatsionnom Pole S Ogranichennoy Moshchnost'yu, pp 1-18.  
\*FTD-MT-65-131

Optimal Guidance Flight of Space Vehicle by A. K. Platonov, A. A. Dashkov, et al.  
RUSSIAN, bk, Optimizatsiya Upravleniya Poletom Kosmicheskikh Apparatov, pp 1-12.  
\*FTD-MT-65-125

Pioneers of Rocket Technology: Kibal'chich, Tsiolkovskiy, Tsander, Kondratyuk. Selected Works  
RUSSIAN, rpt, Pionery Raketnoy Tekhniki: Kibal'chich, Tsiolkovskiy, Tsander, Kondratyuk. Izbrannyye Trudy, 1964, pp 1-11; 15-20; 501-598; 601-669.  
\*NASA TT F-9285

Prognosing Trajectory of Space Vehicle Movement Under Discrete Control, by V. A. Yaroshevskiy.  
RUSSIAN, bk, Prognozirovaniye Trayektorii Poleta Pri Diskretnom Upravlenii Kosmichaskim Letatel'nyim Apparatom, 1965, pp 1-28.  
\*FTD-MT-65-126

Programming of Thrust for Space Vehicle Movement in Central Field of Gravitation, by A. I. Lur'ye.  
RUSSIAN, bk, Programmirovaniye Sily Tyagi V Tsentral'nom Pole Tyagoteniya, pp 1-60.  
\*FTD-MT-65-124

Problems of Spacecraft Control During Descent in the Atmosphere, by K. B. Alekseyev, G. G. Bobenin.  
RUSSIAN, bk, Upravleniye Kosmicheskimi Letatel'nyim Apparatom, Moscow, Chap X, 1964, pp 359-396.  
\*NASA TT F-9336

Control of Supersonic Aircraft, by F. I. Sklyanaki.  
RUSSIAN, bk, Upravleniye Sverkhzvukovogo Samoleta, Moscow, 1964, pp 1-388. IR 1901049564  
\*FTD-MT-65-89

Electric Rockets, by L. Gil'berg, 5 pp  
RUSSIAN, np, Ekonomicheskaya Gazeta, No 12, 24 Mar 65, p 33.  
JPRS 27333

Scientific  
Aerospace (Contd)

Guiding of Jets in a Channel of Variable Cross Section, by G. V. Yakovlevskiy.  
RUSSIAN, per, Iz Akad. Nauk, Otd. Mekh i Mash.  
No 1, 1962, pp 60-72.  
ALL AM 5416

Solar Corpuscles and the Interplanetary Medium,  
by E. R. Mistel', 14 pp.  
RUSSIAN, per, Izvestiya Krymskoy Astrofizicheskoy  
Observatoriya, No 30, 1963, pp. 19-24.  
JPRS 29977

Astrophysics: Achievements and Prospects, by  
V. Ginsburg, 14 pp  
RUSSIAN, per, Kommunist, No 4, 15 Mar 65, pp 56-64  
JPRS 29365

Problems of Space Flight, by Maj. Med. Serv. L.  
Khachatur'yants, 5 pp.  
RUSSIAN, np, Krasnaya Zvezda, 20 Mar 65, p. 6.  
JPRS 30152

Aircraft Navigation with the Aid of Artificial  
Earth Satellites, by E. Fedorov and V. Korozov,  
7 pp  
RUSSIAN, per, Kryl'ya Rodiny, No 2, Feb 65, pp 22-23  
JPRS 29093

Fifteenth International Congress on Astronautics  
(Section on Meteorological Satellite Systems),  
by K. Ya. Kondrat'yev, and M. S. Malkevich, 8 pp.  
RUSSIAN, per, Meteorologiya i Gidrologiya, No 3,  
1965, pp 30-41.  
JPRS 29351

Problems of Rescuing Crews at  
Emergencies at Greater Speeds at High  
Flight Altitudes, by A. V. Chesalov,  
16 pp.  
RUSSIAN, per, Tekh Vozdushnogo Flota,  
No 10, 1946, pp 7-12. 9696620  
FTD-TT-65-260

Aviation Institute.  
RUSSIAN, per, Trudy Inst Mosk Ordona  
Lenina, Aviat, No 151.  
\*FTD-MT-65-108

Aviation Institute.  
RUSSIAN, per, Trudy Inst Mosk Ordona  
Lenina, Aviat, No 152.  
\*FTD-MT-65-109

Aviation Institute.  
RUSSIAN, per, Trudy Inst Mosk Ordona  
Lenina, Aviat, No 153.  
\*FTD-MT-65-110

Aviation Institute.  
RUSSIAN, per, Trudy Inst Mosk Ordona  
Lenina, Aviat, No 154.  
\*FTD-MT-65-111

Scientific  
Aerospace (Contd)

Aviation Institute.  
RUSSIAN, per, Trudy Inst Mosk Ordona  
Lenina, Aviat, No 155.  
\*FTD-MT-65-112

Aviation Institute.  
RUSSIAN, per, Trudy Inst Mosk Ordona  
Lenina, Aviat, No 156.  
\*FTD-MT-65-113

Aviation Institute.  
RUSSIAN, per, Trudy Inst Mosk Ordona  
Lenina, Aviat, No 157.  
\*FTD-MT-65-114

Aviation Institute.  
RUSSIAN, per, Trudy Inst Mosk Ordona  
Lenina, Aviat, No 158.  
\*FTD-MT-65-115

Aviation Institute.  
RUSSIAN, per, Trudy Inst Mosk Ordona  
Lenina, Aviat, No 159.  
\*FTD-MT-65-116

On the Propagation of a Shock Wave in the Ground  
During Impact of a Very Fast Meteorite Against  
the Surface of the Planet, by Yu. P. Rayzer, 8 pp.  
RUSSIAN, per, Trudy Komit po Meteoritam  
Meteoritika Desyatoy Meteoritnoy Konferentsii v  
Leningrade 29 Maya - 1 Iyunya 1962, No 24, 1964,  
pp 82-86. 9596779  
FTD-TT-64-1038

Monitoring the Level of Cosmic Radiation During  
the Flights of the Vostok-3, Vostok-4, Vostok-5,  
and Vostok-6 Spacecraft, by I. A. Savenko,  
N. F. Pisarenko, et al.  
RUSSIAN, per, Vest Moskov Univ Seriya III, Fiz i  
Astron, No 2, 1965, pp 40-43.  
\*NASA TT F-9386

Effect of Altitude on the Organism of Fliers  
in Flight, by A. Apollonov, V. Mirolubov,  
16 pp.  
RUSSIAN, per, Voyenno Sani Delo, No 7,  
1938, pp 16-24. 9696649  
FTD-TT-65-259

Aviation News.  
CROATIAN, per, Vazdusni Transport, pp 44-5.  
\*NCSS I-6766  
ID 2204010565

The Problem of Determining the Excitation Forces  
in Vibration Testing, by G. de Vries.  
FRENCH, per, Recherche Aerospaciale, No 102,  
1964, pp 43-49.  
\*NASA TT F-348

Scientific  
Aerospace (Contd)

Transport Aircraft, by I. Hlavac,  
M. Vyletal, 145 pp.  
CZECH, bk, Dopravni Letadla, Nakladatelství  
Dopravy a Spoju, 1963, pp 15-25;  
32-69; 133-171, and 175-200. 9696646  
FTD-TT-64-733

Reconstitution of Re-Entry Into the Atmosphere of  
a Missile After a Period of Flight, by J. Bouttes.  
FRENCH, rpt, Colloque International des Techniques  
de Calcul Analogique et Numerique en Aeronautique,  
9-12 Sep 1963, pp 1-7; 9.  
\*NASA TT F-9382

Aerodynamic Problems of Space-Probe  
Hypersonic Flight Through Planetary  
Atmospheres, by E. Adams.  
GERMAN, rpt, Scientific Society for Aviation  
and Space Travel, and German Society for  
Rocket Technology and Space Travel Research,  
Annual Convention, Berlin, 14-18 Sep 1964.  
\*AEC

Agriculture

Biogeochemical Methods of Prospecting, by  
Dmitriy Petrovich Malyuga, 205 pp.  
RUSSIAN, bk, Biogekhimicheski Metody  
Pishev Rudnykh Masterovzhenii, Moscow,  
1963.  
CB

Aerial Photography Used in Mapping Vegetation  
and Soils.  
RUSSIAN, bk, Opit Kartirovaniya Rastitelnosti i  
Pochvy po Aerofotogram, 1964, 162 pp.  
ATD T 63-29

On the Problem of Interaction between Herbicides  
and Soil, by V. A. Voytekhnova, 8 pp.  
RUSSIAN, per, Agrokimiya, No 3, 1964, pp.96-101.  
JPRS 29993

The Effect of Soil (Root) Acting Herbicides on Plant  
Nutritive Elements in the Soil, by B. A. Guseynov,  
5 pp.  
RUSSIAN, per, Agrokimiya, No 1, Jun 65, pp. 102-104.  
JPRS 30129

Criticism on Procedure for Determining Ratio of Crops,  
by I. Suelov, 5 pp.  
RUSSIAN, np, Ekonomicheskaya Gazeta, No 1, 6 Jan 1965,  
p 32.  
JPRS 29596

Scientific  
Agriculture

The Effectiveness of New Varieties and Hybrids of  
Agricultural Crops, by P. Marinich, 12 pp  
RUSSIAN, per, Ekonomika sil'skogo khozyaystva, No  
2, 1965, pp 29-36.  
JPRS 29735

For Chemistry in Agriculture, by Prof. G. Badir'yan,  
6 pp  
RUSSIAN, per, Ekonomika sel'skogo khozyaystva,  
No 2, 1965, pp 114-117 (Book Review)  
JPRS 29735

The Effect of Simazin and Atrazin on the Microflora of  
Sandy Soil, by L. Yu. Klyuchnikov, A. N. Petrova and  
Yu. A. Polesko, 7 pp.  
RUSSIAN, per, Mikrobiologiya, Vol 33, No 6, 1964,  
pp. 992-995.  
JPRS 30014

Intensification and Deepening Of Agricultural  
Specialization, by I. Rusinov, 12 pp  
RUSSIAN, per, Voprosy Ekonomiki, No 1, Jan 65,  
pp 63-72.  
JPRS 29794

A Study of Treating Orange and Tangerine with "2,4-D"  
in Order to Raise Their Storage Capacity, by Tsung  
Ju-ching (1350 3067 7234), Hsu Ern (5171 3167), Yang  
T'ing-tung (2254 1694 2627), and Li Chien-chih (2621  
1696 4249), 16 pp.  
CHINESE, per, Chung-kuo Nung-yeh K'o-hsueh, No 9,  
15 Sept 64, pp. 22-23.  
JPRS 30055

Application of Triammonium Phosphate and Erh-Ch'in-  
Nung (Cicada Insecticide) As Two Organophosphorus  
Insecticides In Prevention and Treatment Of Insect  
Pests in Agriculture, by Chang Tse-p'u (1728 3419 3302)  
and Wang Shao-ch'eng (3769 1421 2052), 8 pp.  
CHINESE, per, Chung'kuo Nung-yeh K'o-hsueh, No 9, 15  
Sept 64, pp. 33-41.  
JPRS 30055

The Progress of Forestry in Heilungchiang, by Hsu  
Ch'ang (1776 2490), 10 pp.  
CHINESE, per, Heilungchiang Lin-yeh, No 10, 5 Oct  
64, pp. 10-12 and 9.  
JPRS 30140

Forestry and Soil Conservation in Heilungchiang,  
by Wang Tien-wen (3769 3013 2429), 6 pp.  
CHINESE, per, Heilungchiang Lin-yeh, No 10, 5 Oct 64,  
pp. 18-19.  
JPRS 30140

Scientific  
Agriculture (Contd)

Forestry in Liaoning, by Hsu Chan-jen (1776 0594 0033), 7 pp.  
CHINESE, per, Heilung-chiang Lin-yeh, No 10, 5 Oct 64, pp. 22-23.  
JPRS 30140

Relationship Between Soil's Binding Energy on Cation and Soil's Electric Charge, by Hsuan Chia-hsiang (1357 1367 4332), Chang Wan-keng (1723 3979 2704) and Yu T'ien-jen (0060 1131 0038), 7 pp.  
CHINESE, per, K'o-hsueh T'ung-pao, No 3, 17 Mar 65, pp. 271-272.  
JPRS 29951

Development of the Science of Soil, by Fang Tsung-tai (2455 1350 1406) and Ch'ien Ning (0929 1300), 5 pp.  
CHINESE, per, K'o-hsueh T'ung-pao, No 3, 17 Mar 65, pp 273-275  
JPRS 29821

Research on Absorption of Nitrogen and Phosphates As Sustenance by Spiked-Millet, by Hsu Hsai-kao (007) 2037 7559) and Huang Hung-chiao (7006 7703 1293), 6 pp.  
CHINESE, per, T'u-jang T'ung-pao, No 4, Aug 64, p 6-10.  
JPRS 29631

The Physical Characteristics of Several Layers of Paddy Soil Aggregates In the Tai-Hu Lake Areas, by Chu Ming-fu (2612 6900 1301), 15 pp.  
CHINESE, per, T'u-jang T'ung-pao, No 4, Aug 64, pp 11-16.  
JPRS 29631

On Using the EDTA Titration Method To Determine the Water Soluble Sulfate Radicals of Soils, by Wang Hung-K'ang (3769 1347 1600), 5 pp.  
CHINESE, per, T'u-jang T'ung-pao, No 4, 1964, Aug 64, pp 35-36.  
JPRS 29631

The Trace-Element Molybdenum In Agro-Chemistry and Soil Chemistry, by Chou Ming-cheng (0719 7636 6927), 17 pp.  
CHINESE, per, T'u-jang T'ung-pao, No 4, Aug 64, pp 43-49.  
JPRS 29631

Correct Use of the Land for Basic Quotas of All Crops, by Ho' Pyo'ng-hak, 5 pp.  
KOREAN, np, Nodong Sinmun, 9 Mar 65, p. 2.  
JPRS 29962

Recent Activities of Rumanian Agricultural Research Institutes, by T. Muresan, Dr. M. Stefanescu, V. Popa, D. Toma, and Dr. L. Bran, 9 pp.  
RUMANIAN, per, Agricultura Socialista, Vol 3, No 9, 4 Mar 65, pp 8-9.  
JPRS 29603

Scientific  
Agriculture (Contd)

The Main Soil Subtypes of the Forest Zone in the European USSR, by A. A. Zavalishin, 63 pp.  
RUSSIAN, per, Tsentral Muzei Poch im. V. V. Dokuchaeva Akad Nauk SSSR, Collection No 1, Moskva-Leningrad, 1954, pp 100-159.  
CFSTI 65-50066

Relation Between Evapotranspiration and Spatial Distribution of Vegetation Cover, by Czarnowski, Marceij, 40 p.  
POLISH, per, Polska Ak. Nauk, Instytut Geografii, Przegląd Geograficzny, Vol 36, No 2, 1964, pp 245-284.  
\*CFSTI 65-50376

Journal for Scientific Agricultural Research. SERBO-CROATIAN, per, Arhiv za Poljoprivredne Nauke, Vol 17, No 56, 1964, pp 142.  
CFSTI 64-11453/2

Yellowing and Nanism of Rice Plants in North Vietnam, by Bui Huy Dap, 32 pp.  
VIETNAMESE, per, Khoa Hoc Ky Thuat Nong Nghiep, No 3, 1965, pp. 143-154.  
JPRS 30042

Discussions Concerning Intensive Cultivation of Rice, by Dao Dinh Hoan, 6 pp.  
VIETNAMESE, np, Nhan Dan, 6 Apr 65, p.3.  
JPRS 29969

Some Ideas on Agricultural Development, by Minh Chi, 5 pp.  
VIETNAMESE, np, Nhan Dan, 11 Apr 65, p. 2.  
JPRS 29969

Further Ideas on Agricultural Development, by Hoang Phu, 6 pp.  
VIETNAMESE, np, Nhan Dan, 12 Apr 65.  
JPRS 29969

Scientific  
Biological & Medical Sciences

Information Measuring Systems in Space Biology, by R. M. Bayevskiy, et al.  
RUSSIAN, rpt, Avtomaticheskiy Kontrol i Metody Elektricheskikh Izmereniy, Trudy IV Konferentsii, Vol II, 1962, pp 100-105.  
\*NASA TT F-375

Arthogastric Arachnids of Caucasus: Scorpions, by A. A. Byalynitskiy-Birulya.  
RUSSIAN, bk, Chlenistobryukhie Paukopodobnye Kavkazskogo Kraya: Skorpiony, Pt I, 1917, 170 pp.  
CFSTI 64-11114

Fauna of Russia and Adjacent Countries: Arachnoidea; Scorpions, by A.A. Byalynitskiy-Birulya.  
RUSSIAN, bk, Fauna Rossi i Sopredel'nykh Stran: Paukopodobnye Skorpiony, Vol I, No 1, 1917, 154 pp.  
CFSTI 64-11115

Fauna of Russian and Adjacent Countries: Reptiles, by A. M. Nikol'skiy.  
RUSSIAN, bk, Fauna Rossi i Sopredel'nykh Stran: Preymykayushchiesya, Vol II, 1918, 247 pp.  
CFSTI 64-11108

Self-Contained Methods of Anti-Radiation and Anti-Chemical Protection, by V. A. Alkhazov, A. P. Tkachev, 67 pp.  
RUSSIAN, bk, Individual'nye Sredstva Protivoradiatsionnoy i Protivokhimicheskoy Zashchity, Moscow, 1963, 61 pp.  
FTD-TT-64-998

S. S. Bryukhonenko, The Initiator of Artificial Blood Circulation, by A. G. Lapchinskiy, 8 pp.  
RUSSIAN, bk, Iskusstvennoye krovoobrashcheniye, 1964, pp 6-12.  
JPRS 29628

Conference on the Application of Mathematical Methods in Aerospace Medicine, 25, 25 February 1965, by K. A. Ivanov-Muromskiy, et al.  
RUSSIAN, rpt, Konferentsiya po Primeneniyu Matematicheskikh Metodov v Aviatzionnoy i Kosmicheskoy Meditsine, 25, 26 Fevralya 1965 g, 1965.  
\*NASA TT F-374

Fauna and Flora Of the Aral Lake, by L. A. Zenkevich, 5 pp  
RUSSIAN, bk, Morya SSSR, ikh fauna i flora, 1956, pp 367-370.  
JPRS 29370

Intraocular Tension and Blood Pressure, by T. A. Aleksidze, 15 pp  
RUSSIAN, bk, Nekotoryye Voprosy Regulyatsii Vnutriglaznogo Davleniya, 1964, pp 12-26, 134-136.  
JPRS 29756

On the Essence of Life, 357 pp  
RUSSIAN, bk, O Sushchnosti Zhizni, 1964, pp 1-351.  
JPRS 29864

Scientific  
Biological & Medical Sciences (Contd)

Essays on the History of Aviation Medicine, by A. A. Sergeyev, 420 pp.  
RUSSIAN, bk, Ocherki po Istorii Aviatzionnoy Meditsiny, Moscow, 1952. 9227378-V  
NASA TT F-176

Key to Parasites of Freshwater Fish of the U.S.S.R., by I. E. Eykhovskaya-Pavlovskaya, et al.  
RUSSIAN, bk, Opredehitel' parazitov Presnovodnykh ryb SSSR, 1964, 119 pp.  
CFSTI 64-11040

Results of Certain Medical Investigations on Board the Voskhod and Voskhod-2 Spacecraft, by O. G. Gazenko, A. A. Gurdzhian.  
RUSSIAN, rpt, Paper Presented at the Second Annual Conference of the American Astronautical Society, Chicago, 4-7 May 1965.  
NASA TT F-366

Freshwater Fishes of the U.S.S.R. and Adjacent Countries Vol III, by L. S. Berg.  
RUSSIAN, bk, Ryby Presnykh vod SSSR i Sopredel'nykh Stran, 1949, 310 pp.  
CFSTI 63-11057

Comparative Anatomy of the Cerebral Cortex of Mammals, Paleocortex, Archicortex, and Interstitial Cortex, by I. N. Filimonov, 393 pp  
RUSSIAN, bk, Sravnitel'naya Anatomiya Kory Bol'shogo Mozga Mlekopitayushchikh: Paleokorteks, Arkhikorteks i Mezhtuchnaya Kora, 1949, 262 pp  
JPRS 29657

Trematodes of Man and Animals, Fundamentals of Trematodology by E. I. Skryabin.  
RUSSIAN, bk, Trematody Zhivotnykh i Cheloveka, 1962, 563 pp  
\*FTD-TT-65-393

Problems of Physiology and Pathology of Digestion and Metabolism.  
RUSSIAN, bk, Voprosy Fiziologii i Patologii Pishchevareniya i Obmena Veshchestv, Vol IX, 1960.  
CFSTI 63-11172

Development of Life in the Universe, edited by A. G. Masevich, 112 pp.  
RUSSIAN, bk, Vozniknoveniye Zhizni vo Vselennoy, 1964.  
JPRS 29591

Congress on Antibiotics in Prague. Medical Section, by S. I. Eydel'shteyn, 9 pp.  
RUSSIAN, per, Antibiotiki, Vol. I, No. 1, Jan 1965, pp 87-94.  
JPRS 29629



Scientific  
Biological & Medical Sciences (Contd)

New Medicinal Preparations: Aceclidin, 5 pp.  
RUSSIAN, per, Apteknoye Dalo, Vol 14, No 1, Jan-Feb 65, pp. 92-93.  
JPRS 30147

Regenerative Hypertrophy As One of the Basic Methods of Restoration of Organs, by L. D. Liozner, 15 pp  
RUSSIAN, per, Arkhiv Anatomi, Gistologii i Embriologii, Vol XLVIII, No 1, Jan 65, pp 96-102.  
JPRS 29747

Reparative Regeneration Of Tissue Under the Effect Of Ionizing Radiation, by V. P. Mikhaylov, 21 pp  
RUSSIAN, per, Arkhiv Anatomi, Gistologii, i Embriologii, Vol XLVIII, No 2, Feb 65, pp 3-16.  
JPRS 29904

The Pattern of Changes in Regenerative Capacity of Organs of Animals, by L. V. Polezhayev, 17 pp  
RUSSIAN, per, Arkhiv Anatomi, Gistologii, i Embriologii, Vol XLVIII, No 2, 1965, pp 67-74.  
JPRS 29341

Research Conducted By Yugoslavian Scientists In the Field Of Neuroendocrinology and Histology, by A. L. Pavlov, 10 pp  
RUSSIAN, per, Arkhiv Anatomi, Gistologii, i Embriologii, Vol XLVIII, No 2, Feb 65, pp 99-104.  
JPRS 29905

On the Morphogenesis of the Secondary Calcification of the Coronary Arteries, by Yu. V. Lapin.  
RUSSIAN, per, Arkh Pat, Vol 21, 1959, pp 3-9.  
NIH 3-28-65

Morphogenesis and Morphology of the Capsule of Synthetic Vascular Prostheses, by N. A. Bykova and N. R. Dobrova, 12 pp  
RUSSIAN, per, Arkhiv Patologii, Vol XXVI, No 12, 1964, pp 38-45.  
JPRS 29673

Histological Changes in the Laysan Prosthesis Replacement of Arteries, by A. A. Kurygin and A. B. Smirnov, 9 pp  
RUSSIAN, per, Arkhiv Patologii, Vol XXVI, No 12, 1964, pp 45-51.  
JPRS 29678

Leukemia and Ionizing Radiation, by M. V. Svyatukhin, 12 pp.  
RUSSIAN, per, Arkhiv Patologii, Vol XXVII, No 2, 1965, pp. 6-13.  
JPRS 30161

Scientific  
Biological & Medical Sciences (Contd)

Possible Mechanisms of Autoimmunization in Pathology and Its Role in the Pathogenesis of Burn Disease, by I. Ya. Uchitel' and I. I. Kolker, 12 pp.  
RUSSIAN, per, Arkhiv Patologii, Vol XXVII, No 2, 1965, pp. 52-60.  
JPRS 30162

Flights and Physical Training, by Captain B. Yevstar'yev, 6 pp.  
RUSSIAN, per, Aviatsiya i Kosmonavtika, No 1, Jan 65, pp. 44-57.  
JPRS 30111

Training of a Human Being for Weightlessness, by A. Yerezin et al, 8 pp.  
RUSSIAN, per, Aviatsiya i Kosmonavtika, No 1, Jan 65, pp. 64-66 and 68-70.  
JPRS 30111

The Problem of Energy Correlations between Bioluminescence and the Respiration of Luminescent Bacteria, by I. I. Gitel'zon, R. I. Chumakova and A. M. Fish, 7 pp.  
RUSSIAN, per, Biofizika, Vol X, No 1, 1965, pp. 100-104.  
JPRS 30097

Oxygen Tension and Cerebral Hemodynamics during Fatal Blood Loss and Subsequent Resuscitation, by Yu. M. Levin and B. I. Slovikov, 7 pp.  
RUSSIAN, per, Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol LVIII, No 12, Dec 64, pp.27-31.  
JPRS 29980

On the Interaction of Analyzers during Adequate Stimulation of the Vestibular Apparatus of a Dog, by V. N. Barnatskiy, 6 pp.  
RUSSIAN, per, Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol LVIII, No 12, Dec 64, pp 31-35.  
JPRS 29980

Cellular Activation during the Reparative Regeneration of the Liver of White Mice under Conditions of Functional Organic Stress, by N. F. Semenova, 8 pp.  
RUSSIAN, per, Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol LVIII, No 12, Dec 64, pp.80-83.  
JPRS 29980

On the Possibility of Utilizing the Neuronally Isolated Cortex for Investigating the Mechanism of the Effect of Pharmacological Agents in a Chronic Experiment, by M. M. Khananashvili, 5 pp.  
RUSSIAN, per, Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol LVIII, No 12, Dec 64, pp.86-87.  
JPRS 29980

Scientific  
Biological & Medical Sciences (Contd)

Electroencephalographic Analysis of Neurohumoral Mechanisms of Satiety, by K. V. Sudakov, 6 pp.  
RUSSIAN, per, Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol 59, No 2, Feb 65, pp. 3-6.  
JPRS 29918

Comparative Significance of Hemotrophic and Amniotrophic Nutritional Forms during Antenatal Body Development, by I. A. Arshavskiy, 5 pp.  
RUSSIAN, per, Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol 59, No 2, Feb 65, pp. 29-32.  
JPRS 29918

Afferent Impulsation from the Inflammatory Focus, by Z. N. Sergeyeva, Yin Ch'ih-Chang, and S. I. Frankshteyn, 6 pp.  
RUSSIAN, per, Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol 59, No 2, Feb 65, pp. 37-40.  
JPRS 29918

Activity of the Histology and Embryology Section of the Moscow Society of Naturalists for the Second Half of 1963 and First Half of 1964, 7 pp.  
RUSSIAN, per, Byulleten' Moskovskogo Obshchestva Ispytateley Prirody, No 6, 1964, pp. 137-140.  
JPRS 30017

Formation of Melanoidines From Chitin, by S. M. Masluka, T. V. Drezdova, et al.  
RUSSIAN, per, Dok Ak Nauk SSSR, Vol XCVI, No 3, 1954, pp 569-572.  
\*NASA TT F-9330

Effect of Nutritive Medium on Carbohydrate Composition of Yeasts and Their Enzymatic Activity, by A. I. Oparin, et al.  
RUSSIAN, per, Dokl Akad Nauk SSSR, Vol 99, No 4, 1954, pp 593-596.  
NIH 3-22-65

The Distribution of Synaptic Endings of Each Axon System of Separate Neurons, by N. S. Kositsyn, 6 pp.  
RUSSIAN, per, Doklady Akademii Nauk SSSR, Vol CLIX, No 3, 1964, pp 648-651.  
JPRS 29761

Morphological Data on the Effect of Intensified Functioning on the Condition of the Synaptic Apparatus of Spinal Motor Neurons, by M. M. Aleksandrovskaya, Yu. Ya. Geyniaman, V. N. Mats, 5 pp.  
RUSSIAN, per, Doklady Akademii Nauk SSSR, Vol CLIX, No 3, 1964, pp 680-681.  
JPRS 29761

Scientific  
Biological & Medical Sciences (Contd)

The Epidemiological Importance of Ectoparasites of Birds in a Natural Focus of Q Fever in Southern Central Asia, by Z. M. Zhmayeva, et al.  
RUSSIAN, per, Doklady Akad Nauk SSSR (Parazit), Vol 101, No 2, 1955, pp 387-389.  
NIH 4-74-65

Ontogenesis of the Primary Reaction To Light in Rabbits Irradiated during Various Periods of Prenatal Development, by M. S. Myslobodskiy, 6 pp.  
RUSSIAN, per, Doklady Akademii Nauk SSSR, Vol CLIX, No 3, 1964, pp 690-692.  
JPRS 29549

Correlation Between the Length of the Cardiac Cycle Phases and the Rates of Pressure Variation in the Right and Left Ventricles, by Ye. B. Babitsky, V. S. Sal'manovich, et al.  
RUSSIAN, per, Dok Ak Nauk SSSR, Vol CLXI, No 4, 1965, pp 986-988.  
\*NASA TT F-9384

Subjects of the Journal Elektrichestvo (Electricity) for 1965-1966, 21 pp.  
RUSSIAN, per, Elektrichestvo, No 10, 1964, pp. 91-96.  
JPRS 30016

N-Cholinolytics of Predominantly Central Action, by S. M. Golikov, M. A. Razumova, and A. T. Selivanova, 6 pp.  
RUSSIAN, per, Farmakologiya i toksikologiya, Vol 28, No 1, Jan-Feb 65, pp. 20-23.  
JPRS 30144

Nystagmographic Analysis of the Fast Component of Vestibular Nystagmus Caused by Radial Acceleration, by M. M. Levashov, 14 pp.  
RUSSIAN, per, Fiziologicheskii Zhurnal SSSR imeni I. M. Sechenova, Vol 50, No 12, Dec 64, pp 1,424-1,433.  
JPRS 29571

A Simple Micromanipulator for Insertion of Electrodes into the Brain, by A. M. Melekhova and V. L. D'yakov, 6 pp.  
RUSSIAN, per, Fiziologicheskii Zhurnal SSSR imeni I. M. Sechenova, Vol LI, No 2, Feb 65, pp. 278-280.  
JPRS 30008

Results Of the Tenth Congress Of the All-Union Society Of Physiologists Imeni I. P. Pavlov, by V. N. Chernigovskiy, 6 pp.  
RUSSIAN, per, Fiziologicheskii zhurnal SSSR imeni I. M. Sechenova, Vol LI, No 3, 1965, pp 405-409.  
JPRS 29857

Scientific  
Biological & Medical Sciences (Contd)

Distribution Of Inhaled Short-Lived Daughter Products Of Radon In the Respiratory Tract, by V. N. Kirichenko, 5 pp  
RUSSIAN, per, Gigiyena i Sanitariya, No 2, Feb 65, pp 113-116.  
JPRS 29849

Cause and Prevention of Bends During Decompression, by V. A. Averyanov, P. M. Mikhaylov, 6 pp.  
RUSSIAN, per, Gigiyena Trud, No 10, 1962, pp 25-30. 9227098  
ACSIL/64/412

Quantitative Changes in the Sebaceous Function of the Sebaceous Glands under the Effects of Acetone, Gasoline, and White Spirit in Industrial Workers, by V. I. Rogaylin, 7 pp  
RUSSIAN, per, Gigiyena Truda i Professional'nyye Zabolevaniya Vol 9, No 1, Jan 65, pp 27-30.  
JPRS 29695

Study of Central Nervous System Function during Toxicological Experiments, by M. Khorvat, E. Frantik F. Korzhinek, A. Mikiska, G. Mikiskova, 10 pp.  
RUSSIAN, per, Gigiyena Truda i Professional'nyye zabolevaniya, No 3, Mar 65, pp 9-15.  
JPRS 29981

Study of the Role of Ticks of the Genera Dermacentor and Haemaphysalis in Transmission of Brucellosis, by A. A. Volkova, et al.  
RUSSIAN, per, Izv Akad Nauk Kirgiz SSR (Biol), Vol 2, No 7, 1960, pp 5-24.  
NIH 4-73-65

The Use of Free Phage and the System Phage-Bacterium in Studying the Primary Biological Effect of Ionising Radiation, by G. Ye. Fredkin, 12 pp.  
RUSSIAN, per, Izvestiya Akademii Nauk SSSR, Seriya Biologicheskaya, No 1, Jan/Feb 1965, pp 44-52.  
JPRS 29606

Description of the Larva of Haemaphysalis Pavlovskiy Posperova-Shtram, by O. A. Starkoff.  
RUSSIAN, per, Izv Akad Nauk Tadzhik SSR (Biol Otd), Vol 1, No 15, 1964, pp 125-126.  
NIH 4-71-65

Ventricular Fibrillation in Experimental Disturbance of the Coronary Blood Circulation, by V. S. Sergiyevskiy, N. G. Serdyuk, L. A. Tsouy, and D. Ye. Ryasantsev, 11 pp.  
RUSSIAN, per, Kardiologiya, Vol V, No 1, Jan/Feb 65, pp 18-24.  
JPRS 29915

Scientific  
Biological & Medical Sciences (Contd)

Restoration of Esophageal Patency in Inoperable Cancer by Permanent Intubation, by L. G. Kharitonov.  
RUSSIAN, per, Khirurgiya (Moscow), No 39, 1963, pp 135-140.  
NIH 4-43-65

Nikolay Aleksandrovich Semashko and the New Stage in the Development of Public Health Service, by B. D. Petrov, 6 pp  
RUSSIAN, per, Klinicheskaya Meditsina, No 12, Dec 64, pp 3-8.  
JPRS 29565

One Approach To Modeling Psychological Functions, by N. M. Amosov, E. T. Colovan', S. Ya. Zaslavskiy, K. A. Ivanov-Muromskiy, V. S. Starinets, 36 pp.  
RUSSIAN, per, Kibernetika i Tekhnika Vychisleniy, 1964, pp. 116-143.  
JPRS 30156

The Functional and the Organic in the Practice of Internal Medicine in the Light of Ideas on Nervism, by I. A. Kassirskiy, 10 pp  
RUSSIAN, per, Klinicheskaya Meditsina, No 12, Dec 64, pp 25-32.  
JPRS 29565

Contemporary Problems of Medical Science (XX Session of the General Meeting of the Academy of Medical Sciences of the USSR), by V. Kh. Vasilenko and M. A. Zhukovskiy, 13 pp  
RUSSIAN, per, Klinicheskaya Meditsina, No 1, Vol XLIII, Jan 65, pp 3-11  
JPRS 29738

Diagnostics and Cybernetics, by L. B. Naumov, 17 pp  
RUSSIAN, per, Klinicheskaya Meditsina, Vol XLIII, No 1, Jan 65, pp 11-22.  
JPRS 29738

Gas Exchange During Radiation Sickness, by N. A. Kurshakov and S. F. Seberin, 11 pp  
RUSSIAN, per, Klinicheskaya Meditsina, Vol XLIII, No. 1, Jan 65, pp 23-27.  
JPRS 29738

Results of the Study of Atherosclerosis of the Cerebral Vessels in Elderly and Extremely Old Persons, by A. Ya. Mints and N. N. Sachuk, 11 pp  
RUSSIAN, per, Klinicheskaya Meditsina, Vol XLIII, No 1, Jan 65, pp 85-91  
JPRS 29738

On Physiological Shifts In the Organism Of Healthy Persons in the Arctic, by V. A. Popov, 7 pp  
RUSSIAN, per, Klinicheskaya Meditsina, Vol XLIII, No 1, Jan 65, pp 95-100.  
JPRS 29738

Scientific  
Biological & Medical Sciences (Contd)

Clinical Aspects Of Interplanetary Flights, by  
V. V. Parin, Ye. B. Zakrazhevskiy and R. M. Bayevskiy,  
6 pp  
RUSSIAN, per, Klinicheskaya Meditsina, Vol XLIII,  
No 2, Feb 65, pp 3-6.  
JPRS 29795

Clinico-Physiological Assessment of Seismocardiographic Data Obtained during the Orbital Flights of Vostok-5 and Vostok-6. by R. M. Bayevskiy and Yu. N. Volkov, 9 pp  
RUSSIAN, per, Klinicheskaya Meditsina, Vol XLIII, No 2, Feb 65, pp 6-12.  
JPRS 29795

Medical Cybernetics In the USSR, by S. Isaakyan, 7 pp  
RUSSIAN, np, Kommunist, 17 Nov 64, p 3.  
JPRS 29347

Bionics -- A Science Developing Before Our Very Eyes, by A. Prokhorov, 14 pp  
RUSSIAN, per, Kommunist, No 4, 15 Mar 65, pp 46-55.  
JPRS 29365

Significance of Some Methods of Laboratory Diagnosis of Epidemic Hepatitis, by E. M. Dachevskaya, A. Ts. Portnaya, and L. V. Strishko, 7 pp.  
RUSSIAN, per, Laboratornoye Delo, No 2, 1965, pp 87-90.  
JPRS 29638

Report 1. Use of the Precipitation Reaction in Agar for Diagnosis, by Yu. I. Vaserin.  
RUSSIAN, per, Lab Delo, No 9, 1963, pp 33-35.  
NIH 4-7-65

Research Program Of the Leningrad Institute Of Children's Infections Criticized, by M. Mirskiy, 7 pp  
RUSSIAN, np, Meditsinskaya gazeta, 17 Nov 64, pp 1-2.  
JPRS 29906

Department of Medico-Biological Sciences, 10 pp.  
RUSSIAN, np, Meditsinskaya Gazeta, 13 Apr 65.  
JPRS 30090

Department of Clinical Medicine, 26 pp.  
RUSSIAN, np, Meditsinskaya Gazeta, 16 Apr 65,  
JPRS 30090

Department of Hygiene, Microbiology and Epidemiology, 5 pp.  
RUSSIAN, np, Meditsinskaya Gazeta, 23 Apr 65.  
JPRS 30090

Scientific  
Biological & Medical Sciences (Contd)

Materials for Determination of the Age Composition and Epidemiological Significance of the Anopheles Gambiae Giles and Anopheles Funestus Giles Population in Tanganyika, by T. S. Detinova.  
RUSSIAN, per, Med Parazit, Vol 33, No 1, 1964, pp 25-31.  
NIH 3-26-65

Detection of Plasmodium Ovale in Moscow in Persons Infected in West Africa, by A. I. Nemirovskaya, et al, 12 pp.  
RUSSIAN, per, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol XXIV, No 1, Jan-Feb 65, pp. 83-90.  
JPRS 29976

The Effect of Herbicides on Heterotrophic Microorganisms of Ponds, by G. F. Petruk, 5 pp.  
RUSSIAN, per, Mikrobiologiya, Vol 33, No 6, 1964, pp. 1018-1021.  
JPRS 30014

Concerning the Interrelationships of Ixodids and Grain Mites [of the Tyroglyphidae Family], by A. D. Petrova.  
RUSSIAN, per, Nauch Dokl Vyssh Shkol Biol Nauk, No 1, 1959, pp 17-19.  
NIH 3-19-65

Some Methodological Problems of Genetics, by V. N. Stoletov, 15 pp  
RUSSIAN, per, Nauchnyye Doklady Vysshey Shkoly: Filosofskiy Nauki, No 6, 1964, pp 16-25.  
JPRS 29690

Man in a State of Weightlessness (Psychological Experiments), by A. Kitayev-Smyk, 14 pp  
RUSSIAN, per, Nauka i znaniya, No 9, Sept 64, pp 16-21  
JPRS 29743

Processing of Information on Living Organisms Discussions About the Brain, by A. Napalkov and A. Turov, 10 pp  
RUSSIAN, per, Nauka i znaniya, No 9, Sept 64, pp 63-72  
JPRS 29744

Corneal-Muscular Suture Following Extraction of Cataracts, by N. S. Yerenko, 5 pp.  
RUSSIAN, per, Oftalmologicheskii Zhurnal, No 2, 1965, pp. 155-157.  
JPRS 30150

Conditions and Periods Conducive to the Disruption of the Range among the Amphiboreal Types of Seabottom Fauna, by K. N. Nesin.  
RUSSIAN, per, Okeanologiya, Vol 1, No 5, 1961, pp 893-903.  
\*CPSTI- SPECIAL PROJECT

Scientific  
Biological & Medical Sciences (Contd)

The Influence of Suture Material on Tendon Regeneration (An Experimental Investigation), by S. I. Degtyareva and G. I. Lavrishcheva, 7 pp.  
RUSSIAN, per, Ortopediya Travmatologiya i Protezirovaniya, No 1, Jan 1965, pp 52-56.  
JPRS 29608

Homoplasty of Fascial Defects with Refrigerated and Lyophilized Fascias (Experimental Study), by B. F. Morozov, 8 pp.  
RUSSIAN, per, Ortopediya, Travmatologiya i Protezirovaniya, No 1, Jan 1965, pp 56-60.  
JPRS 29608

On the Tick Fauna (Parasitiformes, Ixodidae) Infesting Terrestrial Vertebrates in the Vicinity of Lake Issyk-Kul, by N. A. Filippova.  
RUSSIAN, per, Parazit Sborn, No 18, 1958, pp 110-119.  
NIH 4-66-65

Growth and Metastasis of Walker's Rat Carcinoma With Reference to Various Sites of Its Inoculation, by A. M. Saraeva.  
RUSSIAN, per, Pat Fiziol Eksp Ter, Vol 5, No 66, 1961.  
NIH 3-3-65

Effect of G-Forces On the Higher Nervous Activity of Dogs, by P. V. Vasil'yev and M. G. Gerd, 3 pp  
RUSSIAN, per, Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, Vol 3, No 6, Nov/Dec 64, pp 3-7.  
JPRS 29666

The Effect of Immunotherapy On the State of Tissue Calcification In Rats with Thermic Burns, by B. Ye. Movshev, 6 pp  
RUSSIAN, per, Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, Vol 3, No 6, Nov/Dec 64, pp 32-35.  
JPRS 29666

Vessels of Extremities in Acute Disturbance of the Coronary Circulation, by A. V. Dokukin, 7 pp  
RUSSIAN, per, Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, Vol 3, No 6, Nov/Dec 64, pp 40-43.  
JPRS 29666

Experimental Transplantation of Whole Spleen to Overcome Tissue Incompatibility, by A. N. Pilatov and G. Ye. Yakovlev, 10 pp.  
RUSSIAN, per, Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, Vol IX, No 1, Jan-Feb 65, pp. 11-16, 34-40, and 76-77.  
JPRS 30015

Scientific  
Biological & Medical Sciences (Contd)

Certain Features Peculiar to the Cerebral Blood Supply upon Replacement of Blood Loss with Polyglucin and Blood, by V. B. Koziner, 9 pp.  
RUSSIAN, per, Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, Vol IX, No 1, Jan-Feb, 65, pp. 11-16, 34-40, and 76-77.  
JPRS 30015

Main Problems of the Study of Allergic Diseases in Early Childhood, by G. N. Speranskiy and T. S. Sokolova, 11 pp  
RUSSIAN, per, Pediatrics, Vol 44, No 1, Jan 65, pp 3-10.  
JPRS 29569

Problems of the Rationalization of the System of Immunoprophylaxis of Infections in Children, by S. D. Nosov, 7 pp  
RUSSIAN, per, Pediatrics, Vol 44, No 1, Jan 65, pp 10-14.  
JPRS 29569

Polycardiographic Investigations Of Children with Mitral Disease, by R. L. Garburg, O. G. Solomatina, A. A. Galstyan, 10 pp  
RUSSIAN, per, Pediatrics, Vol XLIV, No 2, Feb 65, pp 3-14.  
JPRS 29333

Some Of the Prospects and Tasks of Clinical Chemistry In Pediatrics, by Yu. Ye. Vel'tishchev, Yu. A. Yurkov, 7 pp  
RUSSIAN, per, Pediatrics, Vol XLIV, No 2, Feb 65, pp 62-67.  
JPRS 29333

Biomedical Aspects of Man's First Emergence Into Outer Space, by V. Parin, 5 pp  
RUSSIAN, np, Pravda, No 79 (17031) 20 Mar 65, p 3.  
JPRS 29800

By the Will of Man. Chain Reactions in the Geographical Environment and the Transformation of Nature, by I. Yu. Dolgushin.  
RUSSIAN, per, Priroda, No 11, 1964, pp 10-22.  
NASA TT F-9235

Orientation and Navigation of Animals: The Most Important Trends in Research in Bionics, by B. P. Manteyfel', M. P. Naumov and V. Ya Yakobi, 14 pp  
RUSSIAN, per, Priroda, No 2, 1965, pp 26-32.  
JPRS 29757

The Effect of Disturbed Function of the Hypophysis During Pregnancy (Acromegaly) on the Prenatal and Postnatal Development of the Child's Brain, by N. S. Sazonova.  
RUSSIAN, per, Probl Endokr Gormonoter, No 9, 1963, pp 87-92.  
NIH 4-53-65

Scientific  
Biological & Medical Sciences (Contd)

Administration of Blood Substitutes in the Treatment of Extensive Superficial Burns, by R. I. Murazyan, L. I. Gerasimova, 5 pp.

RUSSIAN, per, Problemy Gematologii i Perelivaniya Krovi, Vol 10, No 3, Mar 65, pp. 34-36.  
JPRS 30052

Disseminated Vasculitis in Treatment of Hypertension with Apressin, by V. A. Nasonova, et al.

RUSSIAN, per, Sovet Med, No 20, 1956, pp 41-45.  
NIH 4-47-65

Some Urgent Problems Of the Clinical Course and Epidemiology Of Typhoid Fever in Central Asia, by P. A. Alekseyev, 10 pp  
RUSSIAN, per, Sovetskoye Zdravookhraneniye Kirgizii, No 6, Nov-Dec 64, pp 6-12  
JPRS 29791

Clinical Course of Anthrax in the Kirghiz SSR and Evaluation of Some Methods of Treatment, by A. B. Baygel'diyeva, 5 pp  
RUSSIAN, per, Sovetskoye Zdravookhraneniye Kirgizii, No 6, Nov-Dec 64, pp 23-26.  
JPRS 29791

Typhoid Fever Control Measures in Kirgizia, by M. K. Timofeyev, 7 pp  
RUSSIAN, per, Sovetskoye Zdravookhraneniye Kirgizii, No 6, Nov-Dec 64, pp 33-35.  
JPRS 29791

Achievements Of Medical Science Applied In the Public Health Service, by S. Z. Pashchenkov, 7 pp  
RUSSIAN, per, Sovetskoye Zdravookhraneniye, No 1, 1965, pp 46-48.  
JPRS 29343

A Resolution of the Ninth Convention of Medical Workers of Kirghizia, 6 pp  
RUSSIAN, per, Sovetskoye Zdravookhraneniye Kirgizii, No 1, Jan-Feb 65, pp 32-37.  
JPRS 29895

Enzymatic Diagnosis of Myocardial Infarction, by A. A. Shelagurov and Z. K. Trushinskiy, 15 pp.  
RUSSIAN, per, Terapevticheskiy Arkhiv, Vol XXVII, No 2, Feb 65, pp. 3-13.  
JPRS 30065

Restoration of the Sinus Rhythm by Means of an Electric Pulse, by A. L. Syrkia and I. V. Mayevskaya, 10 pp.  
RUSSIAN, per, Terapevticheskiy Arkhiv, Vol XXVII, No 2, Feb 65, pp. 22-28.  
JPRS 30066

Scientific  
Biological & Medical Sciences (Contd)

Dynamics of Sound Symptomtics in Patients Following Replacement of Mitral Valve with an Artificial Ball-Prosthesis, by G. I. Kassirskiy, G. I. Astrakhantseva and V. Yu. Kharin, 5 pp.

RUSSIAN, per, Terapevticheskiy Arkhiv, Vol XXVII, No 2, Feb 65, pp. 28-31.  
JPRS 30067

On the Question of Distribution and Numbers of Ixodid Ticks on Marmots in Kirgizia, by R. V. Grebenyuk, et al.  
RUSSIAN, per, Tr Inst Zool Parazit Akad Nauk Kirgiz SSR, no 4, 1955, pp 107-115.  
NIH 4-67-65

Study of the Possible Role of Ixodid Ticks as Reservoirs and Vectors of Plague Microbes, by R. V. Grebenyuk, et al.  
RUSSIAN, per, Trudy Inst Zool Parazit Akad Nauk Kirgiz SSR, No 5, 1956, pp 121-127.  
NIH 4-68-65

Comparative Data on Infection of Ticks of the Genus Dermacentor With Brucellae, by A. A. Volkova, et al.  
RUSSIAN, per, Trudy 4 Konf Prirod Ochag Bolez Vopr Parazit Akad Nauk Kazakh SSR Alma-Ata, No 3, 1961, pp 106-107.  
NIH 4-72-65

Introduction To Medical Genetics, by Ye. F. Davidenkova and I. I. Shitil'bens, 6 pp  
RUSSIAN, per, Tsitologiya, Vol VII, No 1, 1965, pp 126-128  
JPRS 29342

Direct Division of a Nucleus, by V. Ya. Brodskiy, 39 pp  
RUSSIAN, per, Uspokhi Sovremennoy Biologii, Vol 58, No 3(6), 1964, pp 367-394.  
JPRS 29568

Mechanism of Development and the Problems of Prevention of Hereditary Diseases of Humans, by B. V. Konyukhov, 21 pp  
RUSSIAN, per, Uspokhi Sovremennoy Biologii, Vol 58 No 3 (6), 1964, pp 423-440  
JPRS 29568

Biochemistry of Trace Elements and the Problem of Nitrogen Nutrition of Plants, by Ya. V. Poyve, 9 pp.  
RUSSIAN, per, Vestnik Akademii Nauk SSSR, No 1, Jan 65, pp. 42-50.  
JPRS 29772

Scientific  
Biological & Medical Sciences (Contd)

Automatic Devices in Microbiological Research, by V. N. Chernov, 8 pp.  
RUSSIAN, per, Vestnik Akademii Nauk SSSR, No 2, 1965, pp. 66-70.  
JPRS 29971

All Union Congress of Soviet Physiologists, by A. M. Beketayev, M. A. Rozybakiyev, K. T. Tashenov, 6 pp.  
RUSSIAN, per, Vestnik Akademii Nauk Kazakhskoy SSR, No 2, Feb 65, pp. 70-72.  
JPRS 30149

The Eighth Scientific Session of the Institute of Cardiovascular Surgery of the Academy of Medical Sciences USSR, by N. Yu. Litmanovich, 7 pp.  
RUSSIAN, per, Vestnik Khirurgii imeni I. I. Grekova, Vol XCIV, No 1, Jan 65, pp 152-154.  
JPRS 29691

The Eighth All-Union Conference Of Roentgenologists and Radiologists, by I. A. Pereslegin, I. Ye. Rabkin, and G. Mamin, 9 pp.  
RUSSIAN, per, Vestnik Rentgenologii i Radiologii, No 1, Jan/Feb 1965, pp 73-78.  
JPRS 29858

The Action Of Physical and Chemical Factors On the Virus Of Foot-and-Mouth Disease, by I. Naurysbayev, 6 pp.  
RUSSIAN, per, Vestnik Sel'skokhozyaystvennoy Nauki, No 3, 1965, pp 59-63  
JPRS 29896

Rickettsial Conjunctivitis of the Bovine Animal, by I. A. Farzaliyev, et al.  
RUSSIAN, per, Veterinariia, Vol 41, No 6, 1964, pp 25-26.  
NIH 4-22-65

Transplantation of Fish and Aquatic Invertebrates in 1962, by A. F. Karpevich and I. Ye. Lokshina, 25 pp.  
RUSSIAN, per, Voprosy Dkhtologii, Vol 5, No 1, 1965, pp 178-197.  
JPRS 29787

Experience in the Use of Microwave Therapy in Patients Suffering from Sympathetic Ganglionitis and Radiculitis of the Thoraco-Cervical Segment with a Cardiac Pain Syndrome, by Ye. I. Sorokina, 8 pp.  
RUSSIAN, per, Voprosy Kurortologii, Fizioterapii, i Lechebnoy Fizicheskoy Kul'tury, Vol XXX, No 1, 1965, pp. 40-45 and 45-47.  
JPRS 29914

Scientific  
Biological & Medical Sciences (Contd)

Our Experience with Microwave Therapy, by A. D. Golendberg, M. I. Yevstifeyeva, Ye. I. Glazunova, A. Ye. Lyzhkova, and A. N. Ostryakova, 5 pp.  
RUSSIAN, per, Voprosy Kurortologii, Fizioterapii, i Lechebnoy Fizicheskoy Kul'tury, Vol XXX, No 1, 1965, pp. 40-45 and 45-47.  
JPRS 29914

Biochemical and Cytochemical Features of Brain Tumors, by L. Z. Pevzner, Ye. D. Tomina, 23 pp.  
RUSSIAN, per, Voprosy Meditsinskoy Khimii, Vol XI, No 1, Jan/Feb 65, pp 3-17.  
JPRS 29675

Comparative Evaluation of Plastic Materials for the Replacement of Defects of the Dura Mater, by B. G. Gol'dina and A. L. Kadin, 6 pp.  
RUSSIAN, per, Voprosy Neyrokhirurgii, No 1, Jan/Feb 65, pp 46-49.  
JPRS 29726

Change Of Serum Protein Fractions In the Course Of Chemotherapy In Patients with Ovarian Cancer, by G. I. Kulik and L. P. Danilenko, 8 pp.  
RUSSIAN, per, Voprosy Onkologii, Vol XI, No 2, 1965, pp 30-34.  
JPRS 29855

Electrophoretic Analysis Of Serum Proteins In Cancer Patients Before and After Treatment, by S. Ye. Mancylov, A. V. Kantin, G. B. Voskoboynikov, V. G. Gerasimyak, O. N. Nikonova and Shin' Vey-chaon, 6 pp.  
RUSSIAN, per, Voprosy Onkologii, Vol XI, No 2, 1965, pp 74-77  
JPRS 29855

A Method for Determining Fluorine in Foodstuffs and in Organs and Tissues of Animals, by S. K. Gushchin, 9 pp.  
RUSSIAN, per, Voprosy Pitaniya, Vol XIX, No 6, 1960, pp 71-74. 9228767  
AEC-UCRL-Tr-1189 (L)

Accelerated Method of Bacteriological Diagnosis of Salmonellae in Meat by Means of Luminescent Microscopy, by P. N. Steblyuk, 5 pp.  
RUSSIAN, per, Voprosy Pitaniya, Vol 24, No 1, Jan-Feb 65, pp.16-18.  
JPRS 29912

Effect Upon the Organism of Dogs of Meat Products Irradiated with Pasteurizing Doses of Gamma-Radiation, by Yu. I. Shillinger, V. G. Kachkova and N. B. Maganova, 11 pp.  
RUSSIAN, per, Voprosy Pitaniya, Vol 24, No 1, Jan-Feb, 65, pp. 12-24.  
JPRS 29912

Scientific  
Biological & Medical Sciences (Contd)

Data of the Spectral Study of Cancerogenic Hydrocarbons in Sausage and Smoked Fish Products, by P. P. Dikun, 6 pp.

RUSSIAN, per, Voprosy Pitaniya, Vol 24, No 1, Jan-Feb 65, pp.31-35.

JPRS 29912

Formulation of the Problem of Immediate Memory, by P. I. Zinchenko and G. V. Repkina, 12 pp  
RUSSIAN, per, Voprosy Psikhologii, Vol 10, No 6, Nov-Dec 1964, pp 3-12

JPRS 29655

Properties of Genetically Homogenous Clones of Vaccinia Virus, by Yu. Z. Gendon, et al.  
RUSSIAN, per, Vop Virus, Vol 3, 1964, pp 291-296,  
NIH 3-12-65

Current Topics In Soviet Military Medicine, 22 pp  
RUSSIAN, per, Voyenno-Meditsinsky Zhurnal, Nos 3, 4, 6, 7, 9 and 10, 1964.  
JPRS 29050

Space Medicine Research during the Flight of the "Voskhod", by A. V. Lebedinskiy and Dr. Yu. G. Nefedov, 6 pp.  
RUSSIAN, per, Zdorov'ye, No 1, Jan 65, pp. 7-8.  
JPRS 29911

Medico-Geographic Study of Belorussia, by D. P. Belyatskiy, 7 pp.  
RUSSIAN, per, Zdravookhraneniye Belorussii, No 3, Mar 65, pp. 42-46.  
JPRS 30009

The Purposes and Tasks of "Journal of Evolutionary Biochemistry and Physiology", by Ye. Kreps, 5 pp.  
RUSSIAN, per, Zhurnal Evolyutsionnoy Biokhimii i Fiziologii, Vol 1, No 1, Jan/Feb 65, pp. 3-6.  
JPRS 29973

Basic Trends in the Evolution of Tissue Energy Metabolism in a Number of Vertebrates, by N. A. Verzhbinskaya and M. V. Savina, 8 pp.  
RUSSIAN, per, Zhurnal Evolyutsionnoy Biokhimii i Fiziologii, Vol 1, No 1, 1965, pp. 26-31.  
JPRS 30098

Study of Natural Foci of Tick Rickettsiosis in Southwestern Kirgizia, by T. L. Proreshnaya, et al.  
RUSSIAN, per Zh Mikrobiol, Vol 40, No 12, 1963, pp 56-60.  
NIH 4-70-65

Scientific  
Biological & Medical Sciences (Contd)

Materials Pertaining to Study of the Etiology of Hemorrhagic Fever with Renal Syndrome, by A. A. Avakian, Et Al.  
RUSSIAN, per, Zh Mikrobiol, Vol 41, No 7, 1964, pp 129-134.

NIH 4-6-65

The Immunobiological Effectiveness of the Associated Plague, Tularemia, and Brucellosis Vaccine during Various Methods of Epicutaneous Administration, by V. G. Filipenko, T. A. Shchekina and A. M. Polyakova, 11 pp  
RUSSIAN, per, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 1, Jan 65, pp 14-20.  
JPRS 29733

Experiment in Mass Gamma-Globulin Prophylaxis of Epidemic Hepatitis in the Lithuanian SSR  
Report II - Comparative Data on the Effectiveness of Different Methods of Gamma-Globulin Prophylaxis of Epidemic Hepatitis, by T. S. Podsedlovskiy and Ye. A. Faktoris, 8 pp  
RUSSIAN, per, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 1, Jan 65, pp 61-66.  
JPRS 29733

Scientific Studies on Infectious Pathology in the Mongolian People's Republic, by M. P. Kozlov and G. Ochirvaan', 5 pp  
RUSSIAN, per, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 1, Jan 65, pp 32-35.  
JPRS 29734

On the Method of Obtaining a Streptococcal Aerosol under Experimental Conditions, by Ye. P. Sinel'nikova, 5 pp  
RUSSIAN, per, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 1, Jan 65, pp 120-123  
JPRS 29733

An Experimental Study of Polydisperse Bacterial Aerosols,  
Report II - A Basic Definition of the Polydispersional System for the Calculation of Indices of the Survival of Pathogens, by V. P. Zhalko-Titarenko, 9 pp  
RUSSIAN, per, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 1, Jan 65, pp 123-129.  
JPRS 29733

The Fourteenth All-Union Congress of Epidemiologists, Microbiologists, and Infectious Disease Specialists, by G. P. Belikov, 6 pp.  
RUSSIAN, per, Zhurnal Mikrobiologii, Epidemiologii, i Immunobiologii, No 1, Jan 65, pp. 150-152.  
JPRS 30151

An Experimental Study of Polydispersed Bacterial Aerosols, by V. P. Zhalko-Titarenko, 3 pp  
RUSSIAN, per, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 2, 1965, pp 63-73.  
JPRS 29840



Scientific  
Biological & Medical Sciences (Contd)

The Epidemiology of Epidemic Hepatitis (Botkin's Disease), by Sh. S. Khalfen and F. N. Gerbuz, 8 pp.  
RUSSIAN, per, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 3, Mar 65, pp. 111-116.  
JPRS 30146

Routine  $\gamma$ -Globulin Prophylaxis against Infectious Hepatitis (Botkin's Disease) and Duration of Immunity, by D. Ye. Zibitsker, A. V. Kiselev, 10 pp.  
RUSSIAN, per, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 3, Mar 65, pp. 116-122.  
JPRS 30146

Review of the Book by N. I. Kereyev: "Q-Fever in Kazakhstan", by G. S. Sukhodoyeva, M. M. Rementsova, 6 pp.  
RUSSIAN, per, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 3, Mar 65, pp. 154-157.  
JPRS 30146

A Soviet Study of Pest-Allergen on Animals and Volunteers, by M. D. Pryadkina, V. Yu. Gavrilenkova and E. A. Chernova, 8 pp.  
RUSSIAN, per, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 4, Apr 65, pp. 27-32.  
JPRS 30145

Eunuchoidism and Marmoration of the Corpus Striatum, by M. M. Amosov,  
RUSSIAN, per, Zh Nevropat Psikhiat Korsakov, Vol 20, 1927, pp 403-419.  
NIH 3-6-65

Electronic Computers in the Diagnosis of Aphasia, by A. G. Frantsuz, I. M. Tonkonogiy, and I. Ya. Levin, 12 pp  
RUSSIAN, per, Zhurnal nevropatologii i psikiatrii imeni S. S. Korsakova, Vol 64, No 12, 1964, pp 1750-1755.  
JPRS 29755

Clinical Forms of Tick Encephalitis in Belorussia, by I. J. Protas and V. I. Votyakov, 9 pp.  
RUSSIAN, per, Zhurnal Nevropatologii i Psikiatrii imeni S. S. Korsakova, Vol LXV, No 3, 1965, pp. 361-366.  
JPRS 30157

The Problem of Pseudopsychopathology under Conditions of Isolation and Sensory Deprivation, by O. N. Kuznetsov and V. I. Lebedev, 10 pp.  
RUSSIAN, per, Zhurnal Nevropatologii i Psikiatrii imeni S. S. Korsakova, Vol LXV, No 3, 1965, pp. 386-393.  
JPRS 30158

Scientific  
Biological & Medical Sciences (Contd)

On the Question of the Use of Ridinol in Parkinsonism, by I. I. Vyedyenskaya.  
RUSSIAN, per, Zh Nevropat Psikhiat Korsakov, Vol 64, No 6, 1964, pp 837-840.  
NIH 6-63-65

Molecular Mechanisms of Ontogenesis and the Problem of Cancer, by Zh. A. Medvedev, 30 pp  
RUSSIAN, per, Zhurnal Vsesoyuznogo Khimicheskogo Obshchestva imeni D. I. Mendeleyeva, Vol 8, No 4, 1964, pp 394-398  
JPRS 29523

Interrelation Between Nucleus and Cytoplasm and the Problem of Cellular Differentiation, by A. A. Neyfakh, 21 pp  
RUSSIAN, per, Zhurnal Vsesoyuznogo Khimicheskogo Obshchestva imeni D. I. Mendeleyeva, Vol 8, No 4, 1964, pp 403-412  
JPRS 29523

Cytogenetics of Tumors, by Ye. Ye. Pogosyants, 20 pp  
RUSSIAN, per, Zhurnal Vsesoyuznogo Khimicheskogo Obshchestva imeni D. I. Mendeleyeva, Vol 8, No 4, 1964, pp 449-458  
JPRS 29523

Achievements In the Genetics and Phenogenetics Of Certain Mental Diseases, by V. P. Efroimson and M. Ye. Vartanyan, 17 pp  
RUSSIAN, per, Zhurnal Vsesoyuznogo Khimicheskogo Obshchestva, No 4, 1964, pp 462-466.  
JPRS 29545

Structural and Histochemical Characteristics of the External Geniculate Body of Primates, by T. V. Ball', V. V. Portugalov, Ye. G. Shkol'nik-Yarros, 13 pp  
RUSSIAN, per, Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlova, Vol XIV, No 4, 1964, pp 707-715  
JPRS 29546

Electrophysiology of a Conditioned Reflex Formed in Response to Stimulation of Thalamic Midline Nuclei, by G. T. Sakhiulina and G. Kh. Merzhanova, 12 pp.  
RUSSIAN, per, Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlova, Vol XV, No 1, 1965, pp. 3-10.  
JPRS 30007

Electrophysiological Data on the Influence of Some Psychopharmacological Drugs on Various Structures of the Human Brain, by N. N. Traugott, L. Ya. Balonov, and D. A. Kaufman, 15 pp.  
RUSSIAN, per, Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlova, Vol XV, No 1, 1965, pp. 42-51.  
JPRS 30007

Scientific  
Biological & Medical Sciences (Contd)

Dynamic Localization of Conditioned Inhibition Produced by Hypnotic Suggestion, by I. I. Korotkin and M. M. Suslova, 11 pp.  
RUSSIAN, per, Zhurnal Vyshey Nervnoy Deyatel'nosti imeni I. P. Pavlova, Vol XV, No 1, 1965, pp. 53-60.  
JPRS 30007

On the Biology of the Mammoth Indonesian Monitor Lizard (*Varanus Komodoensis* Ouwens), by I. G. Darevskii, et al.  
RUSSIAN, per, Zool Zh, Vol 43, No 9, 1964, pp 1355-1360.  
NIH 4-23-65

On the Time of Preservation of Avian Spirochetes in the Body of Hundry Argas Persicus, by R. E. Nikitina.  
RUSSIAN, per, Zool Zh, Vol 43, No 11, 1964, pp 1723-1724.  
NIH 4-69-65

Proof of the Ability of Insects to Distinguish the Circle, the Triangle and Other Simple Figures, by G. A. Mazokhin-Porshnyakov and T. M. Vishnevskaya, 10 pp.  
RUSSIAN, per, Zoologicheskii Zhurnal, Vol XLIV, No 2, 1965, pp.192-197.  
JPRS 29986

Primary Tumors of the Cranium and the Spine with Effect on the Nervous System, by D. Kitov.  
BULGARIAN, per, Khirurgiia (Sofia), No 14, 1961, pp 307-310.  
NIH 4-16-65

The Effect of X-Ray on the Formation of Organic Peroxides in the Body and the Relationship Between Organic Peroxides and Mercapto Compounds, by Chang I-sheng, Mei Shang-chun, Chou Lin-li, Liu Wen-yun, Miao Shu-p'ing and Hung Jui-ch'uan, 9 pp.  
CHINESE, per, K'o-hsueh T'ung-pao, No 2, Feb 1965, pp 151-154.  
JPRS 29641

Change of Static Potential in the Egg Cell During Ovulation of Bufo Bufo Gargarizans, by Chang Ch'ung-li (1728 1504 3810), Yu Mu-chen (0151 1970 6297) and Chang Chih-i (1728 5268 0001), 5 pp.  
CHINESE, per, K'o-hsueh T'ung-pao, No 2, Feb 1965, pp 155-157.  
JPRS 29641

Recent Research on the Nutritive Cell Tumors, by Lin Ch'iao-chih (2651 1564 4460) and Sung Hung-chiao (1345 7703 6356), 19 pp  
CHINESE, per, K'o-hsueh T'ung-pao, No 3, 17 Mar 65, pp 212-221.  
JPRS 29762

Scientific  
Biological & Medical Sciences (Contd)

Identification Of Antibiotic C-4326 and Its Effect On Experimental Tumors, by Wu Shu-yun (0702 3219 0061), Cheng Chih-hsin (6774 0037 2450), Hsieh Yu-yuan (6200 3022 0337) and Ts'ai Jun-sheng (5591 3337 3932), 5 pp  
CHINESE, per, K'o-hsueh T'ung-pao, No 3, 1965, 17 Mar 65, pp 256-258  
JPRS 29762

Evaluation and Its Movements From the Viewpoint of Psychiatry, by V. Vondracek.  
CZECH, bk, Hodnoceni a Jeho Poruchy z Hlediska Psychiatrie, 1964, pp 7-190.  
\*FTD-TT-65-532

Results of Parasitological Investigations in a Natural Focus of Tick-borne Meningo-Encephalitis in Former Ostravsky Territory, by J. Asmera, et al.  
CZECH, per, Cesk Parasit, No 9, 1962, pp 5-14.  
NIH 4-65-65

Determining Fatigue Limits by Testing One Sample, by V. Simek, 15 pp.  
CZECH, per, Strojirenstvi, Vol No 3, 1964, pp 216-222. 9696632  
FTD-TT-64-1009

Some Observations Concerning Attacks of Mosquitoes Aedes Vexans on Young Ducklings in the Nest, by K. Hudec.  
CZECH, per, Zool Listy, Vol 9, No 23, 1960, pp 265-268.  
NIH 3-4-65

On the Purification of Antidiphtheria and Antitetanus Plasma, by Adrianus Jan Van Triet.  
DUTCH, bk, Over de Zuivering Van Antidifterieen Antitetanusplasma, Thesis, Delft 1957, pp 140 and xix, partial translation.  
NIH 4-29-65

Thesaurismosis Hereditaria Lipoidica Tuitier-Pompen-Wyers (angiokeratoma Co Corporis Diffusum Van Fabry), W. P. De Groot.  
DUTCH, per, Nederl T Geneesk, Vol 107, No 15, 1963, pp 687-693.  
NIH 4-37-65

The Diagnostic Value of Antinuclear Factors Demonstrated by Means of Fluorescent Antibodies, by W. Hijmans, et al.  
DUTCH, per, Nederl T Geneesk, No 106, 1962, pp 2097-2101.  
NIH 4-41-65

Speech and Stereotaxic Thalamic Lesions, by F. C'Andrea, et al.  
FRENCH, per, Acta Neurol, Vol 19, No 5, 1964, pp 749-755.  
NIH 4-59-65

Fractionation of Deoxyribonucleic Acids by Salting Out Treatment in Alcohol Medium, by D. Cattani.  
FRENCH, per, Bull Soc Chim Biol, Vol 46, Nos 9-10, 1964, pp 1035-1045.  
NIH 3-8-65

A Case of Stiboneuroepithelio-blastoma in a Gilt-Head Fish, by Thomas.  
FRENCH, per, Bull Asso Franc Cancer, No 21, 1932, pp 385-396.  
NIH 4-14-65

Studies of Oviposition During Autogenesis on Culicids. III. Numerical Data on the Act of Oviposition in a Fertilized Female of *Culex pipiens Autogenicus* Roubaud (Several Females with One Male), by Yolande Deduit.  
FRENCH, per, Comptes Rendus Soc Biol, Vol 151, No 11, 1957, pp 1954-1956.  
NIH 4-15-65

Application of Gamma Spectrometry to the Study of the Radioactive Contamination of Milk, by Ch. A. Bizelon, R. Moret, 16 pp.  
FRENCH, per, Le Lab, Vol XLIV, 1964, pp 241-250.  
9228583  
AEC-UCRL-Tr-1188(L)

Two Cases of Pncreatic Denervation; Neurectomy of the Post-Ganglion Plexus, by M. Polleux, et al.  
FRENCH, per, Presse Med, Vol 72, No 52, 1964, pp 3097-3101.  
NIH 4-49-65

Investigations on Phototropism, by W. H. Arisz.  
FRENCH, per, Recueil des Travaux Botaniques Neerlandais, Vol XV, 1915, pp 44-72; 115-135; 165-213.  
\*AEC

Presentation of a Case of Epithelial Laryngeal Cyst. "Communication", by G. Portmann, et al.  
FRENCH, per, Rev Laryng, No 81, 1960, pp 119-121.  
NIH 4-50-65

Must One Operate in Certain Types of Acute Pancreatitis?, by M. Georges Pelissier,  
FRENCH, per, Mem Acad Chir, No 89, 1963, pp 223-227.  
NIH 4-48-65

Intravenous Pancreatography by Excretion of a Tetraiodated Product, by G. Ledoux-Lebard, et al.  
FRENCH, per, Presse Med, No 72, 1964, pp 1579-1580.  
NIH 4-44-65

Acute Hemorrhagic Pancreatitis with Necrosis in the Dog, by J. Hureau, et al.  
FRENCH, per, Presse Med, No 71, 1963, pp 710-712.  
NIH 4-42-65

The Mayo Centennial Year, by J. Debelut.  
FRENCH, per, Presse Med, No 72, 1964, pp 2829-2830.  
NIH 4-36-65

The Treatment of Acute Hemorrhagic Pancreatitis, by M. Rene Brette.  
FRENCH, per, L Med Lyon, No 42, 1961, pp 935-940.  
NIH 4-34-65

Cure of a Case of Myasthenic Lupus Erythematosus (Adrenal Insufficiency) by the Vaudremet Vaccines and Prolonged Adrenal Replacement Therapy, by M. H. Gougerot.  
FRENCH, per, Bull Soc Franc Derm Syph, No 41, 1934, pp 1674-1678.  
NIH 4-40-65

Lispe Nivalis Wiedemann (Muscidae, Lispiinae) and Ochthera sp (Ephydriidae), diptera Predators of Simulium Dammusum Theobald and S. Adersi Pomeroy in the Upper Volta, by G. Balay, et al.  
FRENCH, per, Bull Soc Path Exot, No 57, 1964, pp 611-618.  
NIH 4-25-65

Observations on the Oviposition of Simulium Dammusum Theobald and Simulium Adersi Pomeroy (Diptera, Dimuliidae) in Eastern Haute-Volta, by G. Balay.  
FRENCH, per, Bull Soc Path Exot, No 57, 1964, pp 588-611.  
NIH 4-26-65

With Reference to Some Familial Cases of Chronic Glaucoma Simplex, by Berriere Et Al.  
FRENCH, per, Bull. Soc Ophthal Franc, Vol 64 No 11, 1964, pp 785-794.  
NIH 4-17-65

Involuntary Somnolence During the EEG. A Study of Contributing Factors, by J. Raboutet, et al.  
FRENCH, per, Rev Neurol, No 101, 1959, pp 404-408.  
NIH 4-18-65

Characteristic Electrical Activities of Some Cerebral Structures in Man, by D. Albe-Fessard, et. al.  
FRENCH, per, Ann Chir, Vol 17, No 17/18, 1963, pp 1185-1214.  
NIH 4-9-65

Scientific  
Biological & Medical Sciences (Contd)

Coxitis: Statistical and Etiologic Data,  
by Bernard Courtois,  
FRENCH, per, Rev Prat, Vol 10, No 9,  
1960, pp 917-936.  
NIH 3-16-65

Clinical and Laboratory Studies on  
Familial Periodic Paralysis With  
Hypokalemia, by A. Kreindler, et al.  
FRENCH, per, Rev Neurol, Vol 110, No 4,  
1964, pp 377-393.  
NIH 3-30-65

On the Pharmacological Influence of the Kidney  
Function, by E. Starkenstein.  
GERMAN, per, Archiv fuer Experimentelle Pathologie  
und Pharmacologie, Vol XCII, No 1, 1922, pp 1, 2.  
\*NASA TT F-9340

The Dependence of Diuresis on the Salt Content  
and Hydrogen Concentration of Drinking Water,  
by E. Starkenstein.  
GERMAN, per, Archiv fuer Experimentelle  
Pathologie und Pharmacologie, Vol CIV, 1924,  
pp 6-22.  
\*NASA TT F-9337

On the Variation of Strength During Movement,  
by J.H.O. Reijla.  
GERMAN, per, Archiv fuer die Gesamte Physiologie,  
Vol CXCI, 1921, pp 234-257.  
\*NASA TT F-9339

The Possibility of Using a Large-Surface Methane  
Flow Counter for Detecting Contamination in Human  
Beings, by W. G. Rudat, M. W. Scrogea.  
GERMAN, per, Atompraxis, Vol X, 1964, pp 469-472.  
\*AEC

Splitting of a Serine-Specific  
Transfer-Ribonucleic Acid Fraction  
by T. Ribonuclease, by R. Dutting, et al.  
GERMAN, per, Biochim Biophys Acta,  
Vol 91, No 4, 1964, pp 573-583.  
NIH 3-27-65

Splitting of Soluble RNA and Serine-  
Specific Transfer-RNA Fractions With  
Pancreatic Ribonuclease, by  
F. Melchers, et al.  
GERMAN, per, Biochim Biophys Acta, Vol 91,  
No 4, 1964, pp 559-572.  
NIH 3-18-65

Branchiogenic Anomalies Associated with  
the Larynx. Surgical Clinic "Papayannou"  
Kairo (Prof. Th. Papayannou).  
GERMAN, per, Dtsch Z Chir, Nos. 225 & 226,  
1930, pp 304-307.  
NIH 4-51-65

Impulse Reaction of the Middle Ear, by  
H. Albrecht.

GERMAN, per, Hochfrequenztech. u. Elektroak.,  
Vol LXXI, No. 3, 1962, pp 107-110.  
CACL

Scientific  
Biological & Medical Sciences (Contd)

A New Method for Chemical Determination  
of the Estrogen Hormones in Urine,  
by Gerd Ittrich.  
GERMAN, per, Hoppe Seyler Z Physiol  
Chem, Vol 312, 1958, pp 1-14.  
NIH 3-7-65

Correlation Between Body Weight, Potential  
Fecundity, and the Amount of Blood Ingested  
in Mosquitoes of the Genus *Aedes*, by  
N. V. Volozina.  
GERMAN, per, Med Parazit, Vol 32,  
No 5, 1963, pp 515-521.  
NIH 3-29-65

Investigation with I 131-Rose Bengal,  
I 131-Biligraphin, S 35-Bromsulphalein a  
and C 14-Persantin, for Accumulatory and  
Excretory Function of the Liver, by  
N. Lang.  
GERMAN, per, Radioactive Isotope In  
Klinik und Forschung, No 5, 1963,  
pp 416-427.  
NIH 4-44-65

Report About an Acquired Esophageal-  
tracheal Fistula Caused by Blunt Injury  
to the Thorax, by F. Spath, et al.  
GERMAN, per, Radiol Austria, No 12,  
1961, pp 3-8.  
NIH 4-56-65

Remarks on Disturbances of Pulmonary  
Diffusion, by P. H. Rossier, et al.  
GERMAN, per, Schweiz Med Wschr, Vol 84,  
No 2, 1964, pp 25-27.  
NIH 4-52-65

Experiments with 1.5 to 5 MeV Electrons  
of an Electron Accelerator, by K. Gund,  
et al.  
GERMAN, per, Strahlentherapie, No 77, 1948,  
pp 573-584.  
NIH 4-28-65

The Recto-sigmoidomyotomy, a New  
Surgical Therapy for Congenital Megacolon,  
by A. G. Weiss, et al.  
GERMAN, per, Strasbourg Med, No 7, 1956,  
pp 171-179.  
NIH 4-57-65

Distribution of the Cell System Which Stores  
Catecholamines. Autoradiographic Studies  
with Tritiated DOPA, by K. Hempel.  
GERMAN, per, Verh Dtsch Ges Path, No 47,  
1963, pp 286-292.  
NIH 4-60-65

Transmitted Light Interference Microscopy  
After Jamin-Lebedeff, by Horst Piller.  
GERMAN, per, Zeiss-Mitteil, Vol 2, No 18,  
1962, pp 309-334.  
NIH 4-12-65

Scientific  
Biological & Medical Sciences (Cont'd)

Quantitative Measurements by Compensators in Polarized Light, by Josef Gahn.  
GERMAN, per, Zeiss-Mitteil, Vol 3, No 5, 1964, pp 153-192.  
NIH 4-11-65

The Effect of Manual Labor and Perspiration on Blood and Tissue, by W. Gross, O. Kestner.  
GERMAN, per, Z fuer Biologie, Vol LXX, 1919, pp 187-210.  
\*NASA TT F-9338

Light Curvature and Light Growth Reaction, by Leo Brauner, 44 pp.  
GERMAN, per, Z fuer Botanik, No 14, 1922, pp 497-547. 9228768  
AEC-ANL-Tr-167

Investigations on the Phototropisms of the Oat Coleoptile, by Hans-Joachim Reissner.  
GERMAN, per, Z fuer Botanik, Vol XLVI, 1958, pp 474-505.  
\*AEC

Electron-Microscopic Contribution to the Problem of the Organization of the Lymphatic Tissue, by Lothar Cossel.  
GERMAN, per, Z fuer Zellforschung und Mikroskopische Anatomie, No 65, 1965, pp 199-205.  
\*AEC

Demonstration of the Herpes Simplex Virus in a Case of Erythema Exudative Multiform, by J. Soltz-Szots.  
GERMAN, per, Z Haut Geschlechtskr, No 34, 1963, pp 25-30.  
NIH 4-55-65

Additional Information about Erythrokeratoderma Ichthyosiforme Variabile, by L. Borza.  
GERMAN, per, Z Haut Geschlechtskr, No 34, 1963, pp 153-160.  
NIH 4-33-65

Crying, Babbling and First Speech in the Development of Infants, by Hans Tischler.  
GERMAN, per, Z Psychol, Vol 160, No 70, Issues 3 & 4, 1957, pp 210-263.  
NIH 4-24-65

Investigations in a Natural Focus of Tick-Borne Encephalitis (TBE) in Lower Austria -- 4th Communication: Results of Ecological Investigations of a Population of Ixodes Ricinus in 1963, by J. Loew, A. Radda.  
GERMAN, per, Zentralblatt fur Bakteriologie, Parasitenkunde, Infektionskrankheiten und Hygiene, 1964, pp 136-146.  
\*ACSI I-6536C  
ID 2204006665

Scientific  
Biological & Medical Sciences (Cont'd)

Investigations in a Natural Focus of Tick-Borne Encephalitis (TBE) in Lower Austria -- Attempts to Isolate Viruses From Arthropods and Small Mammals, by A. Radda, J. Loew, et al.  
GERMAN, per, Zentralblatt fur Bakteriologie, Parasitenkunde, Infektionskrankheiten und Hygiene, 1963, pp 281-293.  
\*ACSI I-6536A  
ID 2204006665

Investigations in a Natural Focus of Tick-Borne Encephalitis (TBE) in Lower Austria -- 3rd Communication: Attempt at a Demonstration in Toto of the Cycle of TBE in the Natural Endemic Focus, by G. Pretzmann, J. Loew.  
GERMAN, per, Zentralblatt fur Bakteriologie, Parasitenkunde, Infektionskrankheiten und Hygiene, 1963, pp 299-312.  
\*ACSI I-6436J  
ID 2204006665

Problems of Agricultural Pathology and Hygiene, by A. L. Ulitzki, 7 pp.  
HUNGARIAN, per, Dapia Refuium, Vol XXI, No 2, Feb 1962, ACSI I-6596  
ID 2204006265

Parkan Tablet. A Drug Against Parkinson's Disease, by Anna F. Simonyi.  
HUNGARIAN, per, Gyogyszereszet, Vol 7, No 4, 1963, pp 147-148.  
NIH 4-62-65

The Society Of Veterinarians Holds Leadership Election Meeting, by Laszlo Varnagy, 7 pp  
HUNGARIAN, per, Magyar Allatorvosok Lapja, Vol 20, No 2, Feb 65, pp 86-88  
JPRS 29303

On the Effects of Certain Hallucinogenic Agents in Aiding Psychotherapy, by Zoltan Boszormenyi.  
HUNGARIAN, per, Magy Rszichol Szle, Vol 19, No 1, 1962, pp 47-51.  
NIH 4-3-65

The Behavior of the Cutaneous Electrical Resistance in Parkinsonian Patients after Thalamolysis, by G. Margnerita.  
ITALIAN, per, Acta Neurol, Vol 19, No 5, 1964, pp 707-713.  
NIH 4-61-65

Adenoma of the Right Vocal Cord: Case Report, by C. Corradi.  
ITALIAN, per, Ann Mal Oreil Larynx, No 1, 1895, pp 59-64.  
NIH 4-35-65

Scientific  
Biological & Medical Sciences (Contd)

Osteomas of the Cranial Vault, by  
A. Passerini, et al.  
ITALIAN, per, Ann Radiol Diagn,  
Vol 32, No 4, 1960, pp 253-263.  
NIH 4-21-65

The Current Status of our Knowledge of the  
Viral Etiology of Malformations and  
Particular Attention to Congenital Cardiopathies,  
by Sergio Biancone.  
ITALIAN, per, Ann Sanit Pubblica, Vol 53,  
No 3, 1964, pp 439-516.  
NIH 4-30-65

First Studies on the Presence of  
Gangliosidases in the Brain and on  
Products of the Enzymatic Splitting  
of the Gangliosides, by G. Tettamanti,  
et al.  
ITALIAN, per, Boll Soc Ital Biol Sper,  
Vol 39, No 24, 1963, pp 1974-1977.  
NIH 3-2-65

Influence of the Vagus Nerve on  
Heart Rate in Chick Embryo, by P. Zatti.  
ITALIAN, per, Boll Soc Ital Biol Sper,  
Vol 40, No 18, 1964, pp 1067-1069.  
NIH 3-31-65

Endocranial Osteoblastic Chondroma in  
Multiple Chondromatosis, by R. Venturi,  
ITALIAN, per, Chir Organi Mov, Vol 50,  
No 2, 1960, pp 145-159.  
NIH 3-5-65

Discussion of the Diagnosis of Early  
Cranial Metastases of the So-Called  
"Hypernephroma", by R. Venturi.  
ITALIAN, per, Chir Organi Mov, Vol 50,  
No 3, 1961, pp 225-238.  
NIH 3-13-65

Pupillary Light Reflex in Binocular Color  
Rivalry, by Alberto Wirth.  
ITALIAN, per, G Ital Oftal, No 5, 1962,  
pp 22-29.  
NIH 4-58-65

Immune Capacity of the Premature, by  
N. Nigro.  
ITALIAN, per, Minerva Pediat, Vol 14,  
1962, pp 1127-1140.  
NIH 3-24-65

Considerations on a Rare Case of Angioma  
of the Fronto-Orbitosinusal Bone, by  
P. L. Ramaggi, et al.  
ITALIAN, per, Otorinolaring Ital, Vol 29,  
No 3, 1963, pp 165-178.  
NIH 3-14-65

Scientific  
Biological & Medical Sciences (Contd)

Contribution to the Knowledge of the  
Hyperostotic-Sclerosing Lesions of the  
Cranial Skeleton, by P. Filippi, et al.  
ITALIAN, per, Pathologica, No 53, 1961,  
pp 109-116.  
NIH 4-19-65

Use of the Gliding Spectrum in Verbal Tests for  
Central Auditory Lesions, by A. Azzi, A. Ottaviani.  
ITALIAN, per, Rivista di Audiologia Pratica,  
Vol XII, Nos. 1-6, 1962, pp 129-136.  
CAcL

Simultaneous Determination of Potassium  
in Blood Serum and Cerebrospinal Fluid  
in Neuropsychiatric Patients by Means  
of Flame Spectrophotometry, by  
Pietro Sarteschi, et al.  
ITALIAN, per, Riv Neurobiol, Vol 1, 1955,  
pp 319-348.  
NIH 3-23-65

Electrographic Recording of the Pressure  
Values of the Ophthalmic Artery, by  
R. Caramazza, et al.  
ITALIAN, per, Riv Otoneurooftal, Vol 36,  
No 1, 1961, pp 14-27.  
NIH 3-21-65

Studies on the Seasonal Changes of  
Minor Tremor. Analysis by Automatic  
Frequency Analyser, by I. Yamauchi, et al.  
JAPANESE, per, No To Shinkei, Vol 16,  
No 2, 1964, pp 101-107.  
NIH 6-64-65

Freezing Injuries in Yeast Cells. The Mechanism of  
Degradation of Some Phosphorus Compounds of Yeast  
Cells Resulting From Freezing and Thawing, by  
Hiroshi Souzu.  
JAPANESE, per, Telom Kagaku, Vol XXII, 1964,  
pp 109-117.  
\*AEC

The All-Union Conference on the Problems  
of Microbiology in Agriculture, by  
E. Lauzhe, 8 pp.  
LATVIAN, per, 12 Ak Nauk LatvSSR, No 1,  
1964, pp 116-118. 9696605  
FTD-TT-64-1023

Ageing Process of Population, by E. Rossot.  
POLISH.  
Pergamon Press

Chemical Factors, Phyto- and Zooplankton in Carp  
Breeding Ponds Fertilized in Various Ways,  
by M. Bombowa, M. L. Krzeczowska, et al. 40 p.  
POLISH, per, Acta Hydrobiologica, Vol 4, Nos 3-4,  
1962, pp 345-384.  
\*CPSTI 65-50362

Dactylogyrosis in Carp Fry, by K. Bienarz,  
R. Skrzyszowski, 7 p.  
POLISH, per, Acta Hydrobiologica, Vol 4, Nos 3-4,  
1962, pp 385-391.  
\*CPSTI 65-50362

Contribution to Investigations on Blood Coagulation in Carp, by A. Picos, J. V. Gusio, 8p.  
POLISH, per, Acta Hydrobiologica, Vol 4, Nos 3-4, 1962, pp 413-420.  
\*CFSTI 65-50362

On the Infective Larvae of the Gastrointestinal Nematodes of Sheep, and Their Identification, by Mieczyslaw Wertek.  
POLISH, per, Acta Parasitologica Polonica, Vol 2, No 19, 1955, pp 361-404.  
CFSTI 61-31389

Ichthyofauna From the Jaslo Shales of Sobniow, by Anna Jazdzianka.  
POLISH, per, Acta Palaeontologica Polonica, Vol 5, No 4, 1960, pp 367-432.  
CFSTI 61-11312

Investigations on the Mycotrophy of Oaks in Poland, Bioecological Conditions Being Considered, by R. Pachlewski, J. Gagalaka.  
POLISH, per, Acta Societatis Botanicorum Poloniae, Vol 22, No 3, 1953, pp 561-576.  
CFSTI 61-11333

Embryonic Development of Trout (*Salmo trutta* L.), Pike (*Esox lucius* L.) and Roach (*Rutilus rutilus* L.) in the Environment Deprived of Water, by J. Damurat, 8 p.  
POLISH, per, Polskie Archiwum Hydrobiologii, Vol 3 No 15, 1956, pp 166-173.  
\*CFSTI 65-50370

Attempt at Using Plastic Mass for Hydrobiological Apparatus, by J. Paschalski, 8 p.  
POLISH, per, Polskie Archiwum Hydrobiologii, Vol 6 No 19, 1959, pp 117-124.  
\*CFSTI 65-50369

Chlorophyll in the Sestone of Some Polish Lakes as an Indicator of Productivity, by A. Solaka, 55 p.  
POLISH, per, Polskie Archiwum Hydrobiologii, Vol 10, No 23, 1962, pp 111-165.  
\*CFSTI 65-50365

The Speed of the Movements of Plankton Crustacea as a Factor Influencing the Vertical Stratification of Juvenile and Adult Individuals, by L. Szlauer, 11 p.  
POLISH, per, Polskie Archiwum Hydrobiologii, Vol 11, No 24, No 1, 1963, pp 3-15.  
\*CFSTI 65-50371

Results of Research on Bream Stock in the Vistula Pirth in 1951-1952, by Jerzy Pilek.  
POLISH, per, Prace Morskiego Instytutu Rybackiego w Gdyni, Vol 9, 1957, pp 221-246.  
CFSTI 61-11361

The Common Porpoise (*Phocaena phocaena* L.) as a By-catch in the Polish Baltic Fisheries, by Andrzej Ropelowski, 11p.  
POLISH, per, Prace Morskiego Instytutu Rybackiego w Gdyni, No 9, 1957, pp 427-437.  
\*CFSTI 65-50734

Investigations on the Selection of Baltic Cod by Cod-end as a Basis for Establishing the Minimum Mesh-Size, by Walerian Ciegiewica, Witold Strzykowski.  
POLISH, per, Prace Morskiego Instytutu Rybackiego w Gdyni, No 10/A, 1959, pp 351-359.  
CFSTI 61-11358

Flatfish in Polish Pomeranian Bay Coastal Catches, by Włodzimierz Pesolowicz, Jozef Wiktor.  
POLISH, per, Prace Morskiego Instytutu Rybackiego w Gdyni, No 10/A, 1959, pp 383-402.  
CFSTI 63-11458/12

Evaluation of the Principle Methods of Fish-net Conservation and on the Author's Experiments, by Janecz Zaucha, 34 p.  
POLISH, per, Prace Morskiego Instytutu Rybackiego w Gdyni, No 10/B, 1960, pp 17-50.  
\*CFSTI 65-50373

Length and Capacity of the Intestinal Tract and Rate of Passage of Digesta, by Franciszek Horszczaruk, 11 p.  
POLISH, per, Roczniki Nauk Rolniczych, Vol 80-B-2, 1962, pp 115-125.  
\*CFSTI 65-50502

Decomposition of Crude Fiber in the Caecu, by Franciszek Horszczaruk, 14 p.  
POLISH, per, Roczniki Nauk Rolniczych, Vol 80-B-3, 1962, pp 333-346.  
\*CFSTI 65-50502

Food and Growth of Carp Fry and the Dynamics of Food Animals, by A. Gurzeda, P. Wolny.  
POLISH, per, Roczniki Nauk Rolniczych, Vol 81, No 2, 1962.  
\*CFSTI 65-50503

The Influence of Increasing the Density of Stocked Fish Population on the Growth and Survival of Carp Fry, by P. Wolny.  
POLISH, per, Roczniki Nauk Rolniczych, Vol 81, No 2, 1962.  
\*CFSTI 65-50503

The Nature of Development of Crustacean Plankton in Fingerling Ponds Organically Fertilized, by J. I. Rybak.  
POLISH, per, Roczniki Nauk Rolniczych, Vol 81, No 2, 1962.  
\*CFSTI 65-50503

The Use of Purified Town Sewage for Fish Rearing, by P. Wolny.  
POLISH, per, Roczniki Nauk Rolniczych, Vol 81, No 2, 1962.  
\*CFSTI 65-50503

Prevention of Gangrene in Ischemic Extremities, by Algy De Medeiros.  
PORTUGUESE, per, Arq Brasil Med, No 50, 1960, pp 448-453.  
NIM 4-39-65

Association of Gynecomastia and Hypertrophic Pulmonary Osteoarthropathy Among Cases of Bronchopulmonary Neoplasm, by Horacio Podesta, et al.  
PORTUGUESE, per, Prensa Med Argent, Vol 45, No 1, 1958, pp 152-156.  
NIM 4-27-65

Frequency of Electrolyte Changes in Sprue, by I. De Larreches, et al.  
PORTUGUESE, per, Prensa Med Argent, No 50, 1963, pp 2231-2234.  
NIM 4-38-65

Scientific  
Biological & Medical Sciences (Contd)

Medical Journal.  
SERBO-CROATIAN, per, Lijećnicki Vjesnik, Vol 85,  
No 12, 1963, pp 56.  
CFBTI 61-11360

Medical Journal.  
SERBO-CROATIAN, per, Lijećnicki Vjesnik, Vol 86,  
No 1, 1964, 64 pp.  
CFBTI 64-11457/1

Archives of Biological Sciences, by Srdan Stankovic.  
SERBO-CROATIAN, per, Srpsko Biološko Društvo,  
Vol 15, No 3-4, 1963, 184 pp.  
CFBTI 63-11455/3-4

Mammary Carcinogenesis Induced by  
Methylcholanthrene, by Francesco  
Squartini, et al.  
SPANISH, per, Lav Anat Pat Perugia,  
Vol 23, No 1, 1963, pp 5-92.  
NIH 4-20-65

Syndrome of Bronchoalveolar Hypertension,  
Osteoarthropathy and Gynecomastia  
in Endobronchial Neoplasia, by  
Alberto L. C. Maggi, et al.  
SPANISH, per, Prensa Med Argent, Vol 46,  
1949, pp 2385-2390.  
NIH 3-36-65

Prevalence of Rheumatoid Arthritis and  
Rheumatoid Factor in American Indians,  
by T. A. Burch, et al.  
SPANISH, per, Rev Med Chile, Vol 92,  
No 3, 1964, pp 183-186.  
NIH 3-10-65

Gynecomastia in Cancer of the Lung,  
by Alicia Sequera Tamayo.  
SPANISH, per, Rev Policlin Caracas,  
No 15, 1946, pp 388-420.  
NIH 4-8-65

Sedimentation Rate in Sequelaes syndrome  
of Pick, by Horacio Basabe.  
SPANISH, per, Sem Med (B Air), No 42,  
1935, pp 1890-1894.  
NIH 4-32-65

About the Importance of the Fahraeus  
Reaction for Clinical Medicine,  
(Experience with 10,000 Sedimentation  
rates in 400 patients.), by Folke  
Lindstedt.  
SWEDISH, per, Hygien, No 89, 1927,  
pp 876-896.  
NIH 4-46-65

An Examination of the Sedimentation Rate  
in Soldiers, by Ragnar Schnell.  
SWEDISH, per, Hygien, No 90, 1928,  
pp 658-662.  
NIH 4-54-65

Scientific  
Biological & Medical Sciences (Contd)

A Bleeding Ulcer After Treatment with  
Dicoumarine, by Leop. Abramson.  
SWEDISH, per, Svensk Lakartidn, No 40,  
1943, pp 2336-2338.  
NIH 4-31-65

The Development in the Ukraine of the Ideas of A. N.  
Bogomolets on Human Physiological Aging and Longevity,  
by A. F. Makarchenko and A. Z. Kolchinskaya, 11 pp.  
UKRAINIAN, per, Fiziologichnyy Zhurnal, Vol XI, No 1,  
Jan-Feb 65, pp. 3-9.  
JPRS 30099

Human Thermoregulation in the Light of Cybernetics,  
by M. K. Vitte, 7 pp.  
UKRAINIAN, per, Fiziologichnyy Zhurnal, Vol XI, No 1,  
Jan-Feb 65, pp. 32-36.  
JPRS 30099

Reaction of the Neural Elements of the Gastrointestinal  
Tract to the Radiation Effect Due to Total X-Ray  
Irradiation, by Z. Ya. Tkachenko, 10 pp.  
UKRAINIAN, per, Fiziologichnyy Zhurnal, Vol XI, No 1,  
Jan-Feb 65, pp. 104-110.  
JPRS 30099

The Use of Novocaine in the Treatment of Animals  
at Hai-Duong, by Bui Tran Thi, 12 pp.  
VIETNAMESE, per, Khoa-hoc Ky-thuat Nong-Nghiep,  
No 2, Feb 1965, pp 102-105.  
JPRS 29643

Chemistry

A Handbook of Emission Properties of Elements  
and Chemical Compounds, by S. G. Fomenko.  
RUSSIAN, rpt.,  
\*CU

The Organ of Cortis Its Histology and  
Histocchemistry, by Ia. A. Lukin, L. K. Litova.  
RUSSIAN, rpt.,  
Consultants Bureau

Structure of Molecules and the Chemical Bond,  
by Y. K. Sytin, L. Z. Dvornikova.  
RUSSIAN, rpt.,  
Lever Publications, Inc.

Synthesis of Organosilicon Compounds, by A. V.  
Petrov.  
RUSSIAN, rpt.,  
Lever Publications, Inc.



Ferromagnetic Resonance, by S. V. Vonsovskii.  
RUSSIAN, bk, Ferromagnitnyi Rezonans, 1961,  
223 pp.  
CFSTI 64-11019

Reproduction of the Kinematics of the Reactions  
 $\pi^+ p \rightarrow \pi^+ \pi^+ \pi^-$ , by V. K. Grigor'ev,  
V. P. Grishin.  
RUSSIAN, rpt, Vosstanovlenie Kinematiki Reaktsii  
 $\pi^+ p \rightarrow \pi^+ \pi^+ \pi^-$ , Moscow, 1964,  
20 pp.  
\*AEC

Influence of Liquid Sodium on the Long-Time Strength  
of Structural Materials, by G. T. Dykova and V. I.  
Nikitin, 9 pp.  
RUSSIAN, bk, Zhidkiye Metally--Sbornik Statey, 1963,  
pp. 292-299.  
JPRS 29916

Use of Cybernetic Techniques In Soviet Pharmacies,  
by F. N. Vasil'yev and A. G. Vasil'yeva, 5 pp.  
RUSSIAN, per, Aptekhnoye Delo, No 6, Nov/Dec 64,  
pp 5-3.  
JPRS 29792

Solid Phase Reactions in Pharmaceutical Analysis,  
by L. D. Ryabykh, 7 pp.  
RUSSIAN, per, Aptekhnoye Delo, Vol 14, No 1, Jan-  
Feb 65, pp. 49-52.  
JPRS 30147

Use of the Luminescence of Acridine Orange Dye in  
the Study of the Secondary Structure of Nucleic  
Acids, by O. F. Borisova and L. A. Tumerman, 9 pp.  
RUSSIAN, per, Biofizika, Vol X, No 1, 1965, pp. 32-36.  
JPRS 30097

Role of Components of Water-Soluble  
Organic Matter in the Formation of  
Complex Iron-Organic Compounds, by  
I. S. Kaurichev, E. M. Nozdrunova, 5 pp.  
RUSSIAN, per, Dok Moskovskoi Sel'skokhoz  
Akad im. K. A. Timiryazeva (TSKha),  
No 52, 1960, pp 65-70.  
\*CFSTI 65-50063

Computer Techniques In Chemistry, by V. Kafarov,  
5 pp.  
RUSSIAN, per, Ekonomicheskaya Gazeta, No 3, 20  
Jan 65, p 16.  
JPRS 29793

Radioberyllium in Fossil Bones, by V. V.  
Cherdyn'tsev, et al.  
RUSSIAN, per, Geokhimiya, No 12, 1964, pp 1240-1243.  
NASA TT F-9284

Effectiveness of Drinking Water Decontamination  
From Radioactive Substances With Certain Natural  
Sorbents, by Ye. I. Orlova, T. P. Gorbatenkova, V.  
Ye. Kolokolova, K. D. Pronina, and V. A. Smirennaya,  
6 pp.  
RUSSIAN, per, Gigiyena i Sanitariya, No 2, Feb 65,  
pp 50-54  
JPRS 29349

Toxicity of Aliphatic Amines and Its Changes in  
Homologic Series, by A. O. Loyt and V. A. Filov, 9 pp.  
RUSSIAN, per, Gigiyena Truda i Professional'nyye  
Zabolevaniya, No 12, 1964, pp.23-23.  
JPRS 29913

Toxicological Characteristics of Aerosol of Petroleum  
Oils, by V. A. Lutov, 8 pp.  
RUSSIAN, per, Gigiyena Truda i Professional'nyye  
Zabolevaniya, No 12, 1964, pp. 28-33.  
JPRS 29913

The Criteria of Noxiousness during Standardization  
of Chemical Content in the Air of Industrial Plants,  
by E. B. Kurlyandskaya, I. V. Sanotskiy, 9 pp.  
RUSSIAN, per, Gigiyena Truda i Professional'nyye  
zabolevaniya, No 3, Mar 65, pp.3-3.  
JPRS 29981

Experimental Treatment and Prophylaxis of Acute  
Arsenic Poisoning, by I. Ye. Okonishnikova, 8 pp.  
RUSSIAN, per, Gigiyena Truda i Professional'nyye  
zabolevaniya, No 3, Mar 65, pp. 38-43  
JPRS 29981

Interaction of MgO and ZrO<sub>2</sub> With Refractory  
Compounds at High Temperatures in a Vacuum,  
by G. V. Samsonov, et al.  
RUSSIAN, per, Iz Ak Nauk SSSR, Metall i Gornoye  
Delo, No 4, 1964, pp 106-115.  
\*NASA TT F-9346

Sealing of Porous Carbon-Graphite Materials by  
Pyrolytic Carbon in the Process of Their Heat Treat-  
ment in an Atmosphere of Natural Gas, by V. K.  
Pechik, E. I. Makarov, and P. A. Tesner, 18 pp.  
RUSSIAN, per, Khimicheskaya Promyshlennost', No 11,  
Nov 1964, pp 8-13.  
JPRS 29593

Vibration-Fluidized Bed and Some of Its Properties,  
by V. A. Chlenov, N. V. Mikhailov.  
RUSSIAN, per, Khim Prom., No 12, 1964, pp 910-913.  
\*AEC

Study of Structuration Processes During Reinforce-  
ment of Clay Soils with Certain Synthetic Polymers,  
by N. Ya. Solomchenko, L. N. Andreyev, and N. N.  
Serb-Serbina, 9 pp.  
RUSSIAN, per, Kolloidnyy Zhurnal, Vol 27, No 1,  
1965, pp 106-112.  
JPRS 29474

Scientific  
Chemistry (Contd)

Interaction of Certain Refractory Carbides With Zirconium Dioxides, by A. F. Avgustinik, et al. RUSSIAN, per, Ogneupory, No 12, 1964, pp 570-575. \*NASA TT F-9349

Investigating the Chemical Nature of Humic Acids, by S. S. Dragunov, N. N. Zhelokhovtseva, et al. RUSSIAN, per, Pochvovedeniye, No 3, 1950, pp 151-157. \*NASA TT F-9383

Extraction of Complex Acids by Oxygen-Containing Solvents. IV. Extraction of Tetravalent Tin, by B. Z. Iofa, K. P. Mitrofanov, et al, 13 pp. RUSSIAN, per, Radiokhimiya, Vol VI, 1964, pp 419-425. 9228789 AEC-ORNL-Tr-457

Technetium Extraction by Phosphoric Acid Derivatives and by Tricetylamine From Nitric Acid Solutions, by A. A. Zaitsev, I. A. Lebedev, et al, 11 pp. RUSSIAN, per, Radiokhimiya, Vol VI, 1964, pp 440-444. 9228601 AEC-ORNL-Tr-450

Extraction of Technetium (VII) From Alkaline Solution by Pyridine Derivatives, by A. A. Zaitsev, I. A. Lebedev, et al, 11 pp. RUSSIAN, per, Radiokhimiya, Vol VI, 1964, pp 445-448. 9228602 AEC-ORNL-Tr-452

Simplified Method for the Determination of Strontium in Sea Water, 48 pp. RUSSIAN, per, Trudy Gosudar Okeanograf Inst, No 77, 1964. Dept of Navy Tr 4084/ONI Tr 1046

Velocities and Depths Determined by Simultaneous Use of Hodographs of Purely Longitudinal Waves and of One of the Types of Refracted Composite Waves, by E. G. Korovnichenko, 11 pp. RUSSIAN, per, Trudy Instit Geolog Nauk AN Ukr. SSR Ser Geofiz, No 2, 1958, pp 120-129. CFS11 64-11091

Problems of the Chemical Fixation of Molecular Nitrogen, by M. Ye. Vol'pin and V. B. Shur, 10 pp. RUSSIAN, per, Vestnik Akademii Nauk SSSR, No 1, Jan 65, pp. 51-58. JPRS 29972

Mass Spectra of Certain Solid Substances and Their Interpretation, by M. S. Chupakhin, G. G. Glavin. RUSSIAN, per, Zhur Anal Khim, Vol XIX, No 7, 1964, pp 821-829. \*NASA TT F-9304

Scientific  
Chemistry (Contd)

Spectrophotometric Study of the Reactions of Yttrium, Lanthanum, and Cerium with Methylthymol Blue, L. S. Serdyuk and V. S. Smirnaya, 6 pp. RUSSIAN, per, Zhurnal Analiticheskoy Khimii, Vol 20, No 2, 1965, pp 161-164. JPRS 29732

Determination of Ultrasmall Quantities of Bismuth and Antimony in Germanium and Germanium Tetrachloride by the Method of Anode Volt-Amperometry on a Stationary Mercury Electrode, by Ye. N. Vinogradova and A. I. Kamenev, 7 pp. RUSSIAN, per, Zhurnal Analiticheskoy Khimii, Vol 20, No 2, 1965, pp 183-186. JPRS 29732

A Polarographic Method for Determination of Nickel in Phosphor Materials, by Ye. I. Lenisev and L. S. Nadezhkina, 8 pp. RUSSIAN, per, Zhurnal Analiticheskoy Khimii, Vol 20, No 2, 1965, pp 187-191. JPRS 29732

Binary System of Sodium Chromate-Calcium Chromate, by Ye. E. Vil'yanskiy, O. I. Pudovkina. RUSSIAN, per, Zhur Obshch Khim, Vol XVIII, No 6, 1948, pp 1033-1036. \*AEC

The Effect of the Chemical Composition of ZrC and NbC in a Homogeneous Region on Their Electrical and Thermal Properties, by V. S. Neshpor, et al. RUSSIAN, per, Zhur Prikl Khim, Vol XXXVII, No 11, 1964, pp 2375-2382. \*NASA TT F-9350

Attractive Substance (Attractants), by O. A. Korotkova, 11 pp. RUSSIAN, per, Zhurnal Vsesoyuznogo khimicheskogo Obshchestva imeni D. I. Mendeleeva, Vol IX, No 5, 1964, pp 519-523. JPRS 29658

The Analysis of Polyvinyl Alcohol in Test Paper, by Ch'en Kang, 7 pp. CHINESE, per, Hua-hsueh Shih-chieh, No 10, 1963, 10 Oct 63, pp 467-469. JPRS 29564

Calculation by Diagram of Maximum Yield in Chemical Reactions in Equilibrium, by Lu Ta-chun (7120 1129 6874), 9 pp. CHINESE, PER, Hua-hsueh T'ung-pao, 27 Jun 63, pp 53-56. JPRS 29987

The Role of Dislocation in Some Chemical Reactions of Solids, by Wang Chien-ch'i (3769 1696 4388) and Chu Tzu-hsi (2621 1311 4762), 27 pp. CHINESE, PER, Hua-hsueh T'ung-pao, No. 10, 1964, 14 Oct 64, pp 11-21. JPRS 29987

Scientific  
Chemistry (Contd)

Preparation of a pNa Electrode, by Su Yu-sheng (5685 3254 3932), 18 pp.  
CHINESE, per, Hua-hsueh T'ung-pao, No 10, 14 Oct. 64, pp. 44-49.  
JPRS 29937

Adhesion between Natural Rubber and Soft Polyvinyl Chloride, by Lu Chen-yun (0712 2973 5366) and Wang Chih-lu (3769 5263 4389), 7 pp.  
CHINESE, per, Hua-hsueh T'ung-pao, No 10, 14 Oct 64, pp. 50-52.  
JPRS 29937

Application of Organic Reagents in the Polarized Titration and Polarographic Analysis of Inorganic Substances, by Li P'ei-chih (2621 1014 0037), 16 pp.  
CHINESE, per, Hua-hsueh T'ung-pao, No 3, Mar 65, pp. 42-46.  
JPRS 30037

Efficiency Adsorption Column Analysis of Gaseous Hydrocarbons, by Hu Li-chih (5170 7787 5374) and P'eng Shao-i (1756 1421 6654), 6 pp.  
CHINESE, per, K'o-hsueh T'ung-pao, No 2-1965, Feb 1965, pp 163-165.  
JPRS 29597

Progress in Natural Organic Chemistry in Recent Years, by Wang Yu (3076 3730), 20 pp  
CHINESE, per, K'o-hsueh T'ung-pao, No 3, 1965, 17 Mar 65, pp 222-231.  
JPRS 29762

Improved Extractive Separation of Uranium and Zirconium by Using Zirconium-Masking Reagents, by M. Kyra, R. Caletka, et al, 10 pp.  
CZECH, per, Collection of Czechoslovak Chemical Communications, Vol XXVIII, 1963, pp 3337-3344.  
9228799  
AEC-AI-Tr-74

Preparation and Properties of Carbonaceous Products Prepared by the Cracking of Natural Gas, by P. L. Blum, L. Bochirol, et al, 34 pp.  
FRENCH, rpt, 1964. 9228794  
AEC-NP-Tr-1223

Structural Properties of Pyrolytic Carbons Deposited Between 1100 and 1800°C, by C. David, P. Sublet, et al, 23 pp.  
FRENCH, per, Carbon, Vol II, 1964, pp 139-148.  
9228790  
AEC-ORNL-Tr-466

New Indazole Compounds, by Robert Sureau, Gilbert Kremer, et al.  
FRENCH, Patent No 1,297,123.  
Patent Office

The Solubility State of Hydrogen in Palladium and Hydrogenation Catalysts, by J. Franck.  
GERMAN, per, Akademie der Wissenschaften, Goettingen Nachrichten, Vol XI, No 44, 1934, pp 293-296.  
\*AEC

Scientific  
Chemistry (Contd)

The Radiolysis of Liquid Hexane, by T. Gammann.  
GERMAN, per, China, Vol XVIII, No 11, 1964, pp 345-348.  
\*AERE-Berwell

On the Oxidation of Iron in  $H_2O-H_2$ -Ar and  $CO_2-CO$ -Ar Mixtures in the Wustite Range, by H. J. Koch.  
GERMAN, per, Gasvorme, Vol X, 1961, pp 347-359.  
RISI 3860

The Preparation of Carrier-Free Sulfuric Acid, by M. Kucharski, R. Plejewski.  
GERMAN, per, Kernenergie, Vol IV, 1961, pp 445-448.  
\*AEC

The Use of Radioactive Isotopes in the Investigation of the Extraction of Metallic Ions, by J. Mikulski, I. Strouski.  
GERMAN, per, Kernenergie, Vol IV, 1961, pp 815.  
\*AEC

Electrolytic Production of  $^{55}Fe$  Sources. Sealed Sources. VII, by H. Schafer, G. Vorman.  
GERMAN, per, Kernenergie, Vol VII, 1964, pp 111-113.  
\*AEC

Close Order of the K-State, by Hans Gunter Baer.  
GERMAN, per, Z fuer Metallkunde, Vol LVI, No 2, 1965, pp 79-84.  
\*AEC

On the Theory of Catalytic Activity in Mixed Catalysts. The Composition of the Catalytically Active Centers in Mixed Ni-Mg Catalysts, by W. P. Lebedev.  
GERMAN, per, Zeit fur Physik Chemie, Vol CCXXV, No 1-2, 1964, pp 101-115.  
\*FTD-TT-65-221

Obtaining Concentrated Nitrogen Trioxide Gas From Kil. Nitrous Gases, With Simultaneous Production of Pure Nitrates, by C. Schlarb.  
GERMAN, Patent No 243,892, 8 Jul 1909.  
\*AEC

Thermal Decomposition of Aluminum Nitrate, by Max Buchner.  
GERMAN, Patent No 556,140, 4 Aug 1932.  
\*AEC

Methods of Thermal Decomposition of Aluminum Nitrate, by Fritz Gewecke.  
GERMAN, Patent No 556,882, 15 Aug 1932.  
\*AEC

The Ariel Progam for Studying the Photoproduction Reaction in Hydrogen, by G. Farchi, P. Lanciani.  
ITALIAN, rpt, Il Programma Ariel per lo Studio de Reazioni di Fotoproduzione in Idrogeno, Jun 1964.  
\*AEC

Abstracts, by H. H. Hulse.  
JPRS 30037

Scientific  
Chemistry (Contd)

Glutamine Synthesis and Nitrogen Assimilation from Urea and From Ammonium Ions, by Zbigniew Kaniuga.  
POLISH, per, Acta Societatis Botanicorum Poloniae, Vol 27, No 2, 1958, pp 313-342.  
\*CFSTI 61-11322

Vicarious Absorptivities Method for Spectrophotometric Analysis of Binary Systems. Part I and II.  
POLISH, per, Chemia Analityczna, Vol 4, 1959, pp 803-807; 809-818.  
\*CFSTI 61-31293

The Mechanical-Chemical Pulping of Straw According to the Aronovsky Method, by Czeslaw Pustelnik, Jerzy Protekta.  
POLISH, per, Prace Instytutu Celulozowo-Papierniczego, Vol 6, No 1 (10), 1957, pp 16-30.  
\*CFSTI 61-31270

An Investigation of Polish Sulfate Soaps and Tall Oil, by Walentyna Zubranska.  
POLISH, per, Przegląd Papierniczy, No 12, 1958, pp 1-6.  
\*CFSTI 61-31292

Synthesis of Ethylamines From Acetaldehyde, Hydrogen and Ammonia in the Presence of a New Dehydrating and Hydrogenating Catalyst, by E. Truszczanowicz, I. Jaworska, et al.  
POLISH, per, Przemysł Chemiczny, Vol II (34), No 1, 1955, pp 36-39.  
\*CFSTI 61-31285

Synthesis, Properties, and Structure of Fatty Acid Esters of Methyl-  $\alpha$ , D-Glucopyranoside and Methyl-  $\beta$ , D-Glucopyranoside, by Zbigniew Jedlinski.  
POLISH, per, Roczniki Chemii, Vol 32, 1958, pp 1257-1268.  
\*CFSTI 61-11387

Studies on the Kinetics of the Reversible Reaction of Isopropyl Alcohol Dehydrogenation, by Stanislaw Gaborowski.  
POLISH, per, Roczniki Chemii, Vol 33, No 1, 1959, pp 145-156.  
\*CFSTI 61-11375

Digestibility and Utilization of Nutrients, by Franciszek Horaczczak, 18 p.  
POLISH, per, Roczniki Nauk Rolniczych, Vol 80-B-1, 1962, pp 5-27.  
\*CFSTI 65-50502

Bulletin of the Chemical Society Belgrade.  
SERBO-CROATIAN, per, Glasnik Hemijskog Društva - Beograd, Vol 28, No 3-4, 1963, pp 95.  
\*CFSTI 63-11452/3-4

Scientific  
Earth Sciences & Astronomy

Cosmic Radiation, by Yu. G. Nefedov.  
RUSSIAN, bk, 1965. Attach to IR 1901009565.  
\*FTD-MT-65-159

Geographical Description of the Bering Sea: Bottom Relief and Sediments, by P. L. Bezrukov.  
RUSSIAN, bk, Geograficheskaya Kharakteristika Beringova Morya: Relief dno i Donnye Otkryzheniya, 1959, 188 pp.  
\*CFSTI 64-11020

The Use of Single-Axis Orientation for Artificial Earth Satellites, by R. F. Appazov, V. P. Legostayev.  
RUSSIAN, bk, Ispol'zovaniye Odnosnoy Oriyentatsii Dlya Iskusstvennykh Sputnikov Zemli, 1965, pp 1-21.  
\*FTD-MT-65-181

Orbital Orientation Systems Classification for Artificial Earth Satellites, by Ye. N. Tokar, V. N. Branets.  
RUSSIAN, bk, Klassifikatsiya Sistem Orbital'noy Oriyentatsii Iskusstvennykh Oputnikov Zemli, 1965, pp 1-13.  
\*FTD-MT-65-180

Climate of the USSR. Climate of the Free Atmosphere, by N. F. Nakorenko, F. G. Tokar', 263 pp.  
RUSSIAN, bk, Klimat SSSR, Klimat Svobodnoy Atmosfery, No 8, 1959, pp 1-220.  
\*FTD-MT-63-339

Meteoric Phenomena in the Atmosphere; Elements of the Physical Theory of Meteors, by Igor' S. Astapovich.  
RUSSIAN, bk, Meteornye Iavleniya v Atmosfere; Elementy Fizicheskoy Teorii Meteorov, Chapter XXIV, 1958.  
\*Rand

Meteorological and Radiational Regime of Antarctica, by N. P. Rusin.  
RUSSIAN, bk, Meteorologicheski i Radiatsionnyi Rezhim Antarkidy, 1961, 335 pp.  
\*CFSTI 64-11097

Outlines of the Universe, by B. A. Vorontsov-Vel'yaminov.  
RUSSIAN, bk, Ocherki o Vselennoy, Moscow, 1964.  
\*NASA TT F-9034

Investigation of Outer Space in the USSR, by G. A. Skuridin.  
RUSSIAN, rpt, Paper Presented at the Second Annual Conference of the American Astronautical Society, Chicago, 4-7 May 1965.  
\*NASA TT F-367

Analysis of the Flight Trajectory to the Moon, Mars, and Venus, by I. K. Bazhinov.  
RUSSIAN, rpt, Paper Presented at the Second Annual Conference of the American Astronautical Society, Chicago, 4-7 May 1965.  
\*NASA TT F-368

Scientific  
Earth Sciences & Astronomy (Contd)

Method of Autonomous Guidance During Flights  
in Near Planet Orbits, by I. K. Bazhinov.  
RUSSIAN, rpt, Paper Presented at the Second  
Annual Conference of the American Astronautical  
Society, Chicago, 4-7 May 1965.  
\*NASA TT F-369

Survey of the Numerical Solution Techniques for  
Variational Problems in Rocket Flight, by  
V. K. Isayev, V. V. Sonin.  
RUSSIAN, rpt, Paper Presented at the Second  
Annual Conference of the American Astronautical  
Society, Chicago, 4-7 May 1965.  
\*NASA TT F-370

Methods for Investigating the Dynamics of Rocket  
Carriers and Space Devices, by G. N. Mikishev.  
RUSSIAN, rpt, Paper Presented at the Second  
Annual Conference of the American Astronautical  
Society, Chicago, 4-7 May 1965.  
\*NASA TT F-371

Radiation Processes in Stratus Clouds,  
by Ye. M. Feygel'son.  
RUSSIAN, bk, Radiatsionnyye Protsessy v  
Sloistobraznykh Oblakakh, Moscow, 1964.  
\*NASA TT F-9331

Radiation Processes in Stratiform Clouds  
(Chapter I, Section 5 and Chapter II,  
Sections 1-7), by Ye. M. Feygel'son,  
91 pp.  
RUSSIAN, bk, Radiatsionnyye Protsessy  
v Sloistobraznykh, Moscow, 1964,  
pp 59-65, and 69-119. 9696482  
FTD-MT-65-48

Earth Tides Research. Gravimetry, 182 pp.  
RUSSIAN, bk, Rezultaty issledovaniy po Programme  
Mezhdunarodnogo Geofizicheskogo Goda, No 3, 1963,  
9696180  
Amer Meteorol Soc  
E-T-RC-64-1

Correction of Gyrocompass errors in  
Navigation by Ye. L. Smirnov;  
A. A. Yakushenkov, et al.  
RUSSIAN, bk, Uchet Pogreshnostey  
Girokompasa v Sudovozhdenii, 1964,  
pp 1-68.  
FTD-MT-65-147

Barrier Waves in the Atmosphere, by Sh.A. Muselyan.  
RUSSIAN, bk, Volny Prepyatstviy v Atmosfere, 1962,  
112 pp.  
CFSTI 64-11096

Experimental Investigation of the Variation of the  
Spectral Transmittance Coefficient P of the  
Atmosphere, by N. I. Nikitinakaya.  
RUSSIAN, per, Aktinom i Atmosfere Opt Gidromet  
1961, pp 164-168.  
NASA TT F-313

Photometric Investigation of the Presence  
of Outer Layers of Volcanic Origin on  
the Moon, by V. V. Sharnev.  
RUSSIAN, per, Astron Zhur, Vol XLII, No 1,  
1965, pp 136-144.  
\*NASA TT F-9322

Scientific  
Earth Sciences & Astronomy (Contd)

Observations of a Partial Lunar Eclipse on March  
24, 1959, by M. A. Milkhiyev, 7 pp.  
RUSSIAN, per, Byul Vses Astron-Geodez Obshch.  
Ak Nauk SSSR, No 27, Vol XXXIV, 1960, pp 32-36.  
9696502  
DDC RSC-368

The Supernova of 1054 — A Double Star?, by  
I. S. Shklovskiy, 5 pp.  
RUSSIAN, per, Dok Ak Nauk SSSR, Vol CLX, No 1,  
1965, pp 54-56. 9227321  
NASA TT F-340

Diffusion Mechanism of the Daily Variations of  
Cosmic Rays, by G. F. Krimskiy.  
RUSSIAN, per, Dok Ak Nauk SSSR, Vol CLX, No 1,  
1965, pp 61-63.  
NASA TT F-9649

On the Mathematical Theory of Photosynthesis  
of Plant Cover, by Yu. Ross.  
RUSSIAN, per, Doklady Akademiyi Nauk SSSR,  
Vol 157, No 5, 1964, pp 1239-1242.  
ATD T-65-30

The Determination of the Boundaries of Cloud Cover,  
by I. A. Kibel', 6 pp.  
RUSSIAN, per, Doklady akademii nauk SSSR, Seriya  
matematika, fizika, Vol. 160, No 4, pp. 815-818.  
JPRS 30021

The Change in High-Energy Nucleons With  
Altitude in the Atmosphere, by Kh. P. Babayan,  
N. L. Grigorov, et al.  
RUSSIAN, per, Dok Ak Nauk, Arman SSR, Vol XXXVIII,  
No 2, 1964, pp 101-104.  
\*AEC

Magnetic Anomalies of the Dnieper-Donets  
Depression and their Geologic Interpretation  
(Magnitni Anomalii Dniprovs'ko-Donetskoi  
Zapadyny ta Ikh Geologichne Tlumachennya.  
UKRAINE, per, Geologichnyy Zhurnal, Vol 18,  
No 4, 1958, pp 61-71.  
\*ACIC

Structure of the Pre-Cambrian Base of the  
Area Situated on the Left Bank of the  
Middle Flow of the Dneper River (According  
to the Data of Geophysical Investigations).  
RUSSIAN, per, Geologichnyy Zhurnal (Geological  
Journey) Academy of Sciences, Vol 18, No 6  
1958.  
\*ACIC

Some Data Concerning the Physical  
Properties of Kimberlites, by  
D. I. Savrasov.  
RUSSIAN, per, Geology and Geophysics,  
No 12, pp 79-86.  
ACIC

Scientific  
Earth Sciences & Astronomy (Contd)

Use of the Method of Tangents While Interpreting  $A_{\phi}$  Curves Over the Vertical Terrace, by Yu. A. Pavlov. RUSSIAN, per, Geogiya i Geofizika, No 12, pp 109-113. ACIC

Intensity-Altitude Distribution of the Principal Emission Lines of the Night Sky, by T. M. Tarasova, V. A. Slepova. RUSSIAN, per, Geomagnetizm i Aeronomiya, Vol IV, No 2, 1964, pp 321-327. NASA TT F-9268

Magnetohydrodynamics of the Earth's Core, by S. I. Braginskiy. RUSSIAN, per, Geomagnetizm i Aeronomiya, Vol IV, No 5, 1964, pp 898-916. NASA TT F-9273

Variation of Gravimeter Readings as Influenced by Vertical Oscillations of its Base, by P. L. Lukavchenko. RUSSIAN, per, Gosoptekhnizdat, No 36, 1963, pp 187-194. ACIC TC-835

Spectral Radiation Regime of Corn Crops and Computation of the Photosynthetically Active Radiation, by H. Niliak. RUSSIAN, per, Izvestiya Akademii nauk Estonakoy SSR, seriya fiziko-matematicheskikh i tekhnicheskikh nauk, Vol 13, No 3, 1964, pp 177-192. ATD T-65-30

Bulletin of the Main Astronomical Observatory. RUSSIAN, per, Iz Ak Nauk SSSR, Vol V, No 1, 1963. NASA TT F-245

Conditions for Similitude in the Case of Slender Bodies With a Hypersonic Turbulent Boundary Layer, by V. V. Lunev. RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk Mekh i Mash, No 4, 1962, pp 13-17. NASA TT F-9297

The Soil Zones of Eurasia, by V. R. Volobuev. RUSSIAN, per, Izvestiya Akademii Nauk SSSR, Seriya Biologicheskaya, No 4, 1960, pp 542-549. CFSTI 65-50058

Measurement of the Size Spectrum of Cloud and Fog Particles, by A. E. Mikirov, 7 pp. RUSSIAN, per, Iz Ak Nauk SSSR, Ser Geofiz, No 4, 1957, pp 512-513. 9696353 Amer Meteorol Soc DDC -IRA T-R-434

Ionospheric Effects of Proton and Non-Proton Flares According to Observations at the Ionospheric Station of the Crimean Astrophysical Observatory, by Yu. I. Vinogradov. RUSSIAN, per, Iz Krymsk Astrofiz Observ, Vol XXXII, 1964, pp 67-75. NASA TT F-9645

Perspectives of Photon Count Application in the Photo-Electric Tracking Systems Utilized in Astronomy, by P. V. Nikolayev, et al. RUSSIAN, per, Iz Drymsk Astrofiz Observ, Vol XXXII, 1964, pp 173-186. NASA TT F-9647

Scientific  
Earth Sciences & Astronomy (Contd)

Vegetation as an Indicator in the Interpretation of Aerial Photographs of Desert Landscapes in Western Turkmenia. by B. V. Vinogradov, 11 pp. RUSSIAN, per, Iz Vses Geo Obshch, Jan, Feb., Reference in Sov. Geog, Vol II, No 5, 1961, 7 pp. CFSTI 65-50064

Marvelous Orbit, by D. Isakov, 10 pp. RUSSIAN, np, Krasnaya Zvezda, Aug 11, 1964, p 3. 9696768 FID-TT-64-1372

Short-wave Radiation Regime of a Surface Covered with Vegetation, by Yu. Ross. LATVIAN, per, Latvijas PSR Zinatnu Akademijas Vestis, Vol 5, 1957, pp 41-60. ATD T-65-30

Experience in the Organization of Observations, Collection of Information and Study of Dangerous Hydrometeorological Events at the Northern Caucasus Administration of the Hydrometeorological Service, by P. G. Vovchenko and V. F. Protsenko, 5 pp. RUSSIAN, per, Meteorologiya i Gidrologiya, No 3, 1965, pp 44-45. JPRS 29651

Turbidity (Suspension) Currents, by L. V. Poborchaya, 18 pp. RUSSIAN, per, Okeanologiya, Vol 2, No 5, 1962, pp 849-863. CFSTI 64-11089

A Unified Nomenclature and the Principles of a Genetic Classification of Soils, by L. I. Prasolov, 9 pp. RUSSIAN, per, Pochvovedenie, No 6, 1937, pp 775-782. CFSTI 65-50081

Theory of the Podzol-Forming Process, by Prof. N. P. Remezov, 22 pp. RUSSIAN, per, Pochvovedenie, No 8, 1937, pp 1139-1159. CFSTI 65-50082

The First Stages of Soil Formation on Massive-Crystalline Rocks, by B. B. Polynov, 12 pp. RUSSIAN, per, Pochvovedenie, No 7, 1945, pp 327-339. CFSTI 65-50056

Scientific  
Earth Sciences & Astronomy (Contd)

Leading Ideas in the Present-Day Theory of Soil Formation and Soil Development, by B. B. Polynov, 12 pp.  
RUSSIAN, per, Pochvovedenie, No 1, 1948, pp 3-13.  
CFSTI 65-50057

Scientific Fundamentals of Soil Systematics by I. P. Gerasimov, 8 pp.  
RUSSIAN, per, Pochvovedenie, No 11, 1952, pp 1019-1026.  
CFSTI 65-50060

The Millepedes (Julioidea) and Their Role in Soil Formation, by M. S. Gilyarov, 9 pp.  
RUSSIAN, per, Pochvovedenie, No 6, 1957, pp 74-80.  
CFSTI 65-50059

The Recent Advance of the Vedychiy Glacier, by L. D. Dolgushin, S. A. Yevteyev, 8 pp.  
RUSSIAN, per, Priroda, Vol XI, 1963, pp 85-92. 9227122  
DSIS/DRB, Canada

Use of Magnetic and Gravitational Prospecting Data for Compiling Structural Schemes of the Foundation's Surface, by I. S. Yeliseyeva, P. P. Stepanov.  
RUSSIAN, per, Razvedoch i Prom Geofiz, No 51, 1964, pp 49-58.  
ACIC TC-851

The First International Tectonic Map of the World, by A. A. Bogdanov, G. B. Udintsev.  
RUSSIAN, per, Soviet Geology, No 11, Nov 1964.  
\*ACIC

Tectonic Structure of the Aldan Shield Basement, as Interpreted on the Basis of Large-scale Airborne Magnetic Survey Data, by A. I. Krasnov.  
RUSSIAN, per, Soviet Geology, No 11, 1964, pp 61-71.  
\*ACIC

Geologic Interpretation of Some Magnetic Anomalies in the Minor Caucasus, by M.A. Mustafabeyli; B.E. Khesin.  
RUSSIAN, per, Soviet Geology, No 11, 1964, pp 108-113.  
\*ACIC

Application of Airborne Magnetic Survey Data in Studying the Arctic Basin of the Earth's Crust, by V. E. Volk.  
RUSSIAN, per, Soviet Geology, No 11, 1964, pp 117-120.  
\*ACIC

Numerical Solution of an Integral Equation on Theory of Light Scattering in the Atmosphere, by Ye. S. Kuznetsov, B. V. Ovchinikiy.  
RUSSIAN, per, Trudy Geofiz Institut, No 4 (131), 1949, pp 1-103.  
\*NASA TT F-372

Scientific  
Earth Sciences & Astronomy (Contd)

The Emissive Power of Water in the Infrared Region of the Spectrum, by M. A. Brannen, I. L. Zall'manovich, et al, 41 pp.  
RUSSIAN, per, Trudy Glav Geofiz Observat, No 152, 1964, pp 31-67. 9227315  
NASA TT F-319

Method of Calculating Longwave Fluxes in the Troposphere in the Case of a Cloudless Sky, by Ye. P. Barashkova, 17 pp.  
RUSSIAN, per, Trudy Glav Geofiz Observat, No 152, 1964, pp 68-80. 9227323  
NASA TT F-320

Calculation of Certain Errors of Bolometric Pyrheliometers, by Yu. A. Sklyarov, 13 pp.  
RUSSIAN, per, Trudy Glav Geofiz Observat, No 152, 1964, pp 81-89. 9227322  
NASA TT F-321

Scattered and Total Solar Radiation Under Various Conditions, by B. M. Gal'perin, L. P. Seryakova, 17 pp.  
RUSSIAN, per, Trudy Glav Geofiz Observat, No 152, 1964, pp 96-109. 9227324  
NASA TT F-323

Computation of a Hemispherical Radiator for Calibrating Pyrgometers, by T. D. Veytikova, 11 pp.  
RUSSIAN, per, Trudy Glav Geofiz Observat, No 152, 1964, pp 160-167. 9227318  
NASA TT F-326

Tables for Computing the Spectrum of the Particles of a Dispersed System From Its Transparency, by K. S. Shifrin, A. Ya. Perel'man, 21 pp.  
RUSSIAN, per, Trudy Glav Geofiz Observat, No 152, 1964, pp 192-211. 9227318  
NASA TT F-329

Actinometric Observation Techniques at Sea, by D. L. Grishchenko, Ye. P. Nevenel'tsev, et al, 13 pp.  
RUSSIAN, per, Trudy Glav Geofiz Observat, No 152, 1964, pp 212-221. 9227317  
NASA TT F-330

Relation Between the Height of the Lower Boundary of Clouds and the Visibility Range from the Earth, by N. S. Bozhevnikov.  
RUSSIAN, per, Trudy Glavna Geofiz Observator, No 153, 1964, pp 11-17.  
\*FTD-TT-65-551

Albedo of the Earth's Surface within the Territory of the Soviet Union, by V. V. Mukhenberg, 21 pp.  
RUSSIAN, per, Trudy Glavnoy Geofizicheskoy Observatorii imeni A. I. Voyevkova, No 139, 1963 pp 43-60.  
JPRS 29661

Scientific  
Earth Sciences & Astronomy (Contd)

Measurement of the Microstructure by the Method of Small Angles, by K. S. Shifrin, V. I. Golikov, 19 pp.  
RUSSIAN, per, Trudy Glav Geofiz Observat imeni A. I. Voyevkova, No 152, 1964, pp 3-15. 9227317  
NASA TT F-317

Computing the Spectral Distribution of the Brightness of the Cloudless Sky in a Two-Parameter Model of the Atmosphere, by V. K. Kagan, Ye. P. Ryabova, 17 pp.  
RUSSIAN, per, Trudy Glav Geofiz Observat imeni A. I. Voyevkova, No 152, 1964, pp 16-30. 9227319  
NASA TT F-318

Attenuation of Total Radiation in Upper Layer Clouds, by Ye. P. Novosel'tsev, 9 pp.  
RUSSIAN, per, Trudy Glav Geofiz Observat imeni A. I. Voyevkova, No 152, 1964, pp 90-95. 9227338  
NASA TT F-322

Measuring Radiation Balance at Sea, by N. Ye. Ter-Markaryants, D. L. Grishchenko, 20 pp.  
RUSSIAN, per, Trudy Glav Geofiz Observat imeni A. I. Voyevkova, No 152, 1964, pp 116-125. 9227340  
NASA TT F-324

The Distribution of Effective Radiation Throughout the USSR, by L. N. D'yachenko, 18 pp.  
RUSSIAN, per, Trudy Glav Geofiz Observat imeni A. I. Voyevkova, No 152, 1964, pp 126-141. 9227341  
NASA TT F-325

Cuvette for Nephelometric Measurements With High Angular Resolution in the Region 5 to 175°, by O. I. Golikova, 12 pp.  
RUSSIAN, per, Trudy Glav Geofiz Observat imeni A. I. Voyevkova, No 152, 1964, pp 176-185. 9227339  
NASA TT F-327

Spectral Reflectivity of Clouds, by Ye. P. Novosel'tsev, 8 pp.  
RUSSIAN, per, Trudy Glav Geofiz Observat imeni A. I. Voyevkova, No 152, 1964, pp 186-191. 9227337  
NASA TT F-328

On the Reduction of some Atmospheric Transparency Characteristics from on Numerical Value of Solar Constant to Another, by H. Murk.  
RUSSIAN, per, Trudy Institut fiziki i astronomii Akademii nauk Estonakoy SSR, issledovaniya po fizike atmosfery, No 2, 1960, pp 7-14. 9227336  
ATD T-65-30

The Problem of Computing Thermal Radiation of the Atmosphere, by H. Nilliah.  
RUSSIAN, per, Trudy Institut fiziki i astronomii Akademii nauk Estonakoy SSR, issledovaniya po fizike atmosfery, No 2, 1960, pp 67-114. 9227335  
ATD T-65-30

Diurnal and Seasonal Variations of Albedo on some natural surfaces in the Estonian SSR, by K. Tooming.  
RUSSIAN, per, Trudy Institut fiziki i astronomii Akademii nauk Estonakoy SSR, issledovaniya po fizike atmosfery, No 2, 1960, pp 155-163. 9227334  
ATD T-65-30

Scientific  
Earth Sciences & Astronomy (Contd)

Spectroscopic Determination of the Total Quantity of Water Vapor in a Vertical Column of the Atmosphere, by K. S. Shifrin and O. Avaste.  
RUSSIAN, per, Trudy Institut fiziki i astronomii Akademii nauk Estonakoy SSR, issledovaniya po fizike atmosfery, No 4, 1963, pp 15-16. 9227333  
ATD T-65-30

Spectral Albedo of Main Types of Natural Surfaces in the Near Infrared, by O. Avaste.  
RUSSIAN, per, Trudy Institut fiziki i astronomii Akademii nauk Estonakoy SSR, issledovaniya po fizike atmosfery, No 4, 1963, pp 27-41. 9227332  
ATD T-65-30

The Theory of the Radiation Regime of the Plant Cover, by Yu. Ross and T. Nii'son.  
RUSSIAN, per, Trudy Institut fiziki i astronomii Akademii nauk Estonakoy SSR, issledovaniya po fizike atmosfery, No 4, 1963, pp 42-64. 9227331  
ATD T-65-30

Photometric Rod for Determination of Direct Solar Radiation in Crops and Plant Cover, by H. Nilliah.  
RUSSIAN, per, Trudy Institut fiziki i astronomii Akademii nauk Estonakoy SSR, issledovaniya po fizike atmosfery, No 4, 1963, pp 120-123. 9227330  
ATD T-65-30

Certain Properties of Effective Coefficient of Atmosphere's Transparency, by H. Murk.  
RUSSIAN, per, Trudy Institut fiziki i astronomii Akademii nauk Estonakoy SSR, issledovaniya po fizike atmosfery, No 5, 1964, pp 5-9. 9227329  
ATD T-65-30

Evaluation of the Influence of the Temperature Dependence upon the Transmission Function of the Results of the Computation of Thermal Radiation in Terrestrial Atmosphere, by H. Nilliah.  
RUSSIAN, per, Trudy Institut fiziki i astronomii Akademii nauk Estonakoy SSR, issledovaniya po fizike atmosfery, No 5, 1964, pp 10-23. 9227328  
ATD T-65-30

On the Regularities of Variability of Daily Totals of Diffuse Radiation, by L. Undla.  
RUSSIAN, per, Trudy Institut fiziki i astronomii Akademii nauk Estonakoy SSR, issledovaniya po fizike atmosfery, No 5, 1964, pp 24-38. 9227327  
ATD T-65-30

The Possible Solarization in Tartu, by T. Undla.  
RUSSIAN, per, Trudy Institut fiziki i astronomii Akademii nauk Estonakoy SSR, issledovaniya po fizike atmosfery, No 5, 1964, pp 39-50. 9227326  
ATD T-65-30



Scientific  
Earth Sciences & Astronomy (Contd)

Measurement Of Low Atmospheric Pressures With Convection and Ionization Manometers, by M. T. Dmitriyev, 20 pp  
RUSSIAN, per, Trudy Nauchno-Issledovatel'skogo Instituta Gidrometeorologicheskogo Priborostroyeniya, No 11, 1963, pp 49-61.  
JPRS 29356

Objective Analysis of Pressure Pattern Charts of the Northern Hemisphere, by S. A. Mashkovich, 11 pp.  
RUSSIAN, per, Trudy Mirovogo Meteorologicheskogo Tsentra, No 4, 1964, pp 3-10.  
JPRS 29671

Realization of a Scheme for the Objective Analysis of Northern Hemisphere Constant Pressure Charts on an Electronic Computer, by S. A. Mashkovich and S. I. Gubanova, 10 pp  
RUSSIAN, per, Trudy Mirovogo Meteorologicheskogo Tsentra, No 4, 1964, pp 11-16.  
JPRS 29671

Results of Numerical Experiments by the Dynamic Analysis Method, by M. S. Fuks-Rabinovich, 12 pp  
RUSSIAN, per, Trudy Mirovogo Meteorologicheskogo Tsentra, No 4, 1964, pp 17-26.  
JPRS 29671

Experience in the Objective Analysis of the Wind Field by the Optimal Interpolation Method, by M. O. Krichak, 8 pp  
RUSSIAN, per, Trudy Mirovogo Meteorologicheskogo Tsentra, No 4, 1964, pp 44-49.  
JPRS 29671

Uranium and Some Other Elements in Red-Colored Palaeozoic Sediments of Northern Tien-Shan, by K. A. Grigorev, V. I. Kozlov, et al.  
RUSSIAN, per, Trudy Vses Nauch Issled Geol Institut, Vol XCV, 1963, pp 141-148.  
\*AEC

Study Of the Earth's Crust By Seismic Methods, by I. P. Kosinskaya, 10 pp  
RUSSIAN, per, Vestnik Akademii Nauk SSSR, No 2, Feb 65, pp 51-57.  
JPRS 29045

Development of the Earth Sciences in Central Asia and Kazakhstan, 20 pp.  
RUSSIAN, per, Vestnik Akademii Nauk SSSR, No 3, Mar 65, pp 128-150.  
JPRS 30133

Scientific  
Earth Sciences & Astronomy (Contd)

Measurement of the Specific Electric Resistance of Natural Waters in the Solution of Certain Geological Problems, by A. S. Semenov, 11 pp.  
RUSSIAN, per, Vestnik Leningradskogo Universiteta, seriya geologii i geografii, No 1, Vol 6, 1965, pp. 56-63.  
JPRS 30155

Laminar Boundary Layer on a Sublimating Surface, by B. V. Alekseyev.  
RUSSIAN, per, Zhurnal Vychislitel'noy Matematiki i Matematicheskoy Fiziki, Vol 4, No 3, 1964, pp 512-524.  
FTD-MT-65-145

A Special Anhis of Hemispherical Flow During a Large Scale Synoptic Variation, by Shou-Chun Ch'en.  
CHINESE, per, Ch'i Hsiang Hsueh Pao, Vol 32, No 4, 1962, pp 308-321.  
\*FTD-TT-606

The Correlation of Wind Velocity Fluctuation and Atmospheric Turbulence, by Chia-I Chien.  
CHINESE, per, Ch'i Hsiang Hsueh Pao, Vol 33, No 4, 1963, pp 426-434.  
\*FTD-TT-65-607

Atmospheric Turbulence in the Different Temperature Strata in the Boundary Layer, by P'ei-Minn P'u.  
CHINESE, per, Ch'i Hsiang Hsueh Pao, Vol 34, No 2, 1964, pp 211-224.  
\*FTD-TT-65-608

Basic Law on the Hydrometeorological Service, 11 pp.  
CROATIAN, per, Sluzbeni List SFRJ, No 15, 5 Apr 65, pp. 636-639.  
JPRS 30159

The Paris-Toulouse French Gravimetric Base: Extension from Toulouse to Pic Du Midi (Base Gravimetrique Francaise Paris - Toulouse: Extension De Toulouse au Pic Du Midi, by J. Martin. 114 pp.  
FRENCH, bk, Expeditions Polaires Francaises, Resultats Scientifiques No. NS, III, 3, 1964.  
\*SCIC

Geodetic Junction of French North Africa by Synchronized Photographs Taken From the Echo I Satellite, by H. M. Dufour.  
FRENCH, rpt, Symposium de Geodesie par Satellites, Institut Geographique National, 2<sup>e</sup> Direction - Geodesie, Groupe d'Etudes Speciales, Dec 1964, 14 pp.  
\*NASA TT F-9388

A New Stereocomparator with Three Plates, by Raffaele Nistri.  
FRENCH, rpt, Tenth Congress International Photogrammetric Society, No 9, 1964, pp 7-19.  
\*ACIC TC-85

International News. Slope Maps, by Roger Brunet.  
FRENCH, per, Bulletin du Comité Français de  
Cartographie, No 22, Nov 1964, pp 82-93.  
ACIC TC-871

Solar Magnetic Phenomena, by  
Karl-Otto Kiepenheuer.  
GERMAN, per Sterne und Weltraum No 8/9, 1964.  
ACIC

Determination of the Geoid and its Application as a  
Reduction Surface, by H. Moritz.  
GERMAN, per, Z fuer Vermessungswesen, No 6, 1964,  
pp 200-202.  
ACIC TC-839b

The First Budapest Meeting of the Work Committee for  
the Coordination of Meteorological Research, by Istvan  
Bodola, 6 pp.  
HUNGARIAN, per, Idojaras, No 5, Sept-Oct 64, pp. 303-  
306.  
JPRS 30027

The Seventh Conference of the Directors of the  
Hydrometeorological (Meteorological) Services of  
the European Socialist Countries, Held in Budapest,  
by Bela Bell, 7 pp.  
HUNGARIAN, per, Idojaras, No 5, Sept-Oct 64, pp. 306-  
310.  
JPRS 30026

The Northern Sea Route and International Ocean  
Traffic, by Arnihot Stromme Svendsen.  
NORWEGIAN, per, Commerce and Shipping, 22, 24, 27  
Feb; 3 Mar 1965.  
Maritime Administration

Influence of Nitrogen-Phosphorus Fertilization on the  
Chemical Composition of the Water, Primary Plankton  
Formation and Fish Increments in Ponds,  
by S. Wrobel, 54 p.  
POLISH, per, Acta Hydrobiologica, Vol 4, No 2, 1962,  
pp 151-204.  
\*CFSTI 65-50362

Zooplankton and its Biomass in Fertilized Ponds,  
by Maria Klimczyk, 19 p.  
POLISH, per, Acta Hydrobiologica, Vol 6, No 3,  
1964, pp 187-203.  
\*CFSTI 65-50362

A Correlation Between the Grain-size of a Mountain  
River Bed Load and the Physiographical Properties  
of Such River, by Zdzislaw Kajetanowicz.  
POLISH, per, Archiwum Hydrotechniki, Vol 3, No 1,  
1958, pp 3-19.  
CFSTI 61-31298

Investigations on the Mycotrophy of Beech Associations  
on the Baltic Coast, by Tadeusz Domstak.  
POLISH, per, Ekologia Polska, Seria A, Vol 5, No 7,  
1957, pp 213-224.  
CFSTI 61-11329

Astrometric Problems.  
POLISH, per, Geodesja i Kartografia, Vol XII,  
No 3-4, 1963. 9pp.

Influence of Flowing on Soil Displacement,  
by Stanislaw Bec.  
POLISH, per, Pamiętnik Wdrożeniowy Rolniczy i  
Leśny, 1950  
CFSTI 61-11336

The Diurnal Course of Thunderstorm  
Occurrence in Poland, by Maria Stopa,  
16 p.

POLISH, per, Polska Ak. Nauk, Instytut  
Geografii, Przegląd Geograficzny, Vol 36,  
No 1, 1964, pp 103-118.  
\*CFSTI 65-50378

Pattern of Certain Meteorological Elements  
Depending on Vertical Turbulent Heat  
Exchange, by Jerzy Boryczka, 11 p.  
POLISH, per, Polska Ak. Nauk, Instytut  
Geografii, Przegląd Geograficzny, Vol 36,  
No 1, 1964, pp 119-129.  
\*CFSTI 65-50379

Hydrobiological Bases of the Water  
Utilization by Waterworks for Shallow Dam  
Reservoirs, by K. Starnach, 113 p.  
POLISH, per, Polskie Archiwum Hydrobiologii,  
Vol 4, No 17, 1958, pp 9-121.  
\*CFSTI 65-50361

Changes in the Density of Southern Baltic Waters  
Depending Upon the Temperature and Salinity in  
1949-1954, by Wanda Pisek, 45 p.  
POLISH, per, Prace Morskiego Instytutu Rybackiego  
w Gdyni, No 9, 1957, pp 381-425.  
\*CFSTI 65-50364

Hydrological Observations in the  
Southern Baltic Region in 1953-1955,  
by Jerzy Filarski, 18 pp.  
POLISH, per, Prace Morskiego Instytutu  
Rybackiego w Gdyni, No. 10/A, 1959,  
pp 35-52.  
CFSTI 65-50368

Atmospheric Circulation as a Factor in Spatial  
Differentiation of Climatic Conditions in Poland,  
by J. Kuziemski, 14 p.  
POLISH, per, Przegląd Geofizyczny, Vol 7 No 1,  
1962, pp 23-36.  
\*CFSTI 65-50394

Time Space Temperature Distribution in the Lower  
Air-layers Over Water and Soil, by M. Szumiec, 11 p.  
POLISH, per, Przegląd Geofizyczny, Vol 7, No 3, 1962,  
pp 137-167.  
\*CFSTI 65-50396

Frequency of Occurrence of Particular Cloud Species  
in Poland, by W. Warakowski, 8p.  
POLISH, per, Przegląd Geofizyczny, Vol 7, No 3,  
1962, pp 185-192.  
\*CFSTI 65-50397

Some Methods and Results of Research on  
Trace Elements in Atmospheric Precipitation  
in Warsaw, by T. Burakowski, 10 p.  
POLISH, per, Przegląd Geofizyczny, Vol 7,  
No 3, 1962, pp 193-202.  
\*CFSTI 65-50398

Diurnal and Annual Course of Sunshine Duration in  
Cracow, by M. Morawka, 16 p.  
POLISH, per, Przegląd Geofizyczny, Vol 7, No 4, 1962,  
pp 229-244.  
\*CFSTI 65-50399

Scientific  
Earth Sciences & Astronomy (Contd)

- Determination of Water Content of Snow,  
by J. Lewińska, 10 p.  
POLISH, per, Przegląd Geofizyczny, Vol 7, No 4, 1962,  
pp 245-254.  
\*CFSTI 65-50500
- Meteorology and Transportation, by A. Rojecki, 9 p.  
POLISH, per, Przegląd Geofizyczny, Vol 8, Nos 1/2,  
1963, pp 1-9.  
\*CFSTI 65-50388
- On the Influence of Local Conditions on  
the Course of Meteorological Elements,  
by K. Chomicz, 9 p.  
POLISH, per, Przegląd Geofizyczny, Vol 8,  
No 1/2, 1963, pp 11-19.  
\*CFSTI 65-50389
- Cloudiness in Poland, by W. Warakomski, 15 p.  
POLISH, per, Przegląd Geofizyczny, Vol 8 Nos 1/2,  
1963, pp 21-35.  
\*CFSTI 65-50390
- Air Temperature Inversion Frequency at  
Krynica-Zdrog (1956-1960), by  
H. Boniecka-Zolcik, 8 p.  
POLISH, per, Przegląd Geofizyczny, Vol 8,  
No 1/2, 1963, pp 37-44.  
\*CFSTI 65-50391
- Statistical Method of Computing Lows-I,  
by M. Zielińska, 13p.  
POLISH, per, Przegląd Geofizyczny, Vol 8, No 1/2,  
1963, pp 75-87.  
\*CFSTI 65-50392
- Solar Climate of the Baltic Coast, by S. Tyczka, 14 p.  
POLISH, per, Przegląd Geofizyczny, Vol 8, No 4,  
1963, pp 207-220.  
\*CFSTI 65-50393
- Bibliography in the Subjects of Meteorology and  
Climatology of Poland up to 1939, by A. Rojecki,  
224p.  
POLISH, per, Przegląd Geofizyczny, Vol 8, No 4,  
1963, pp 245-255.  
\*CFSTI 65-50501
- Influence of Meteorological Conditions of Radioactive  
Aerosol Concentration in Ground Air-Layers,  
by T. Kopcewicz, 22 p.  
POLISH, per, Przegląd Geofizyczny, Vol 9, No 1,  
1964, pp 3-24.  
\*CFSTI 65-50381
- Some Actual Problems in Numerical Weather  
Forecasting, by K. Haman, 27 p.  
POLISH, per, Przegląd Geofizyczny, Vol 9, No 1,  
1964, pp 25-51.  
\*CFSTI 65-50382
- Course of Extreme Temperatures in Different Air  
Masses Over Warsaw (1951-1960), by  
A. Tomaszewska, 14 p.  
POLISH, per, Przegląd Geofizyczny, Vol 9 No 1,  
1964, pp 53-66.  
\*CFSTI 65-50383
- Meteorological Conditions Favoring  
Formation of Thunderstorms in  
Different Air Masses, by M. Stopa, 9 p.  
POLISH, per, Przegląd Geofizyczny, Vol 9,  
No 1, 1964, pp 67-75.  
\*CFSTI 65-50384

Scientific  
Earth Sciences & Astronomy (Contd)

- Statistical Methods of Low-Water Computation - II,  
by M. Kielinska, 12 p.  
POLISH, per, Przegląd Geofizyczny, Vol 9, No 2,  
1964, pp 109-120.  
\*CFSTI 65-50385
- Turbulent Diffusion of Dust and Other Air Contaminants  
in Different Periods of the Year in Defence on the  
Nature of the Substratum, Especially in Urban  
Conditions, by J. Boryczka, W. Okolowicz, 17 p.  
POLISH, per, Przegląd Geofizyczny, Vol 9 No 2, 1964,  
pp 121-137.  
\*CFSTI 65-50386
- Technique of Airplane Observations of Cloud  
Structure, by B. Jaworska, E. Strauch, et al. 16 p.  
POLISH, per, Przegląd Geofizyczny, Vol 9, No 2,  
1964, pp 157-172.  
\*CFSTI 65-50387
- Geographical Distribution of Heavier Hail Storms  
Recorded in Poland in the 1946-1956 Period,  
by Czesław Kozminski, 16 p.  
POLISH, per, Przegląd Geograficzny, Vol 36, No 1,  
1964, pp 87-102.  
\*CFSTI 65-50377
- Albedo Map of the Gorny Wojcieszow (Silesia),  
by M. Kluge; B. Krawczyk, 11 p.  
POLISH, per, Przegląd Geograficzny, Vol 36 No 1,  
1964, pp 131-141.  
\*CFSTI 65-50380
- Preliminary Investigations on the Participation of  
Soil Organic Matter in the Sorption of Exchange  
Cations, by Jan Szuza.  
POLISH, per, Roczniki Gleboznawcze, Vol 9, No 2,  
1960, pp 57-66.  
CFSTI 61-11348
- Investigation of Soil Displacement Caused by Plowing  
on Slopes, by Zbigniew Martini.  
POLISH, per, Roczniki Nauk Rolniczych, Vol 66, No 2,  
1953, pp 97-123.  
CFSTI 61-11341
- The Effect of Organic Fertilization on the Intensity of  
Metabolism and Circulation of Food Materials in  
Water Reservoirs, by S. Wlodek.  
POLISH, per, Roczniki Nauk Rolniczych, Vol 81,  
No 2, 1962.  
\*CFSTI 65-50503
- Flame Photometric Determination of Soil  
Exchangeable Ions, by Ewa Paszyc-Siepkowska.  
POLISH, per, Rozprawy Hydrotechniczne, No 3,  
1959, pp 91-106.  
CFSTI 61-31303
- An Exact Method of Compensation and Computation  
of Vertical Displacement of Earth's Crust Determined  
From Periodic High Precision Leveling, by  
Andrzej Hermanowski.  
POLISH, per, Zeszyty Naukowe Politechniki  
Warszawskiej, No 70, Geodezja No 8, 1963, pp 3-49.  
CFSTI 63-11387
- Certain Problems of Geography Discussed at the  
Society of Natural Sciences and Geography,  
Camp Course in the Summer of 1964.  
RUMANIAN, per, Natura, Ser Geografie-Geologic,  
Vol XVI, No 6, pp 83-88, 1964.  
\*ACSI I-6660C  
ID 2204008365

Scientific  
Earth Sciences & Astronomy (Contd)

A Transfer Maneuver Between Two Noncoplanar Elliptical Orbits, by M. M. Nita, 19 pp.  
RUMANIAN, per, Studii si Cercetari de Mecanica Aplicata, Vol XIV, No 3, 1963, pp 573-589. 9696604  
FTD-TT-64-1122

Bulletin: Engineering Geology and Hydrogeology. SERBO-CROATIAN, per, Zavod Za Geoloska i Geofizicka Istrazivanja, Series B, No 2, 1962, pp 115.  
CFSTI 62-11756/2

Bulletin: Engineering Geology and Hydrogeology. SERBO-CROATIAN, per, Zavod Za Geoloska i Geofizicka Istrazivanja, Series B, No 3, 1963, pp 142.  
CFSTI 63-11454/2

Gravity Determinations in Spain and the Earth Figure Most Closely Approximating the Geoid Derived from said Data, by G. Sans Huelin, Luis Lozano Calvo.  
SPANISH, per, Memorias Del Instituto Geografico y Catastral, Vol XIX, 1948, pp 1-27.  
ACIC TC-344

Electronics

Radio Electron Espionage Counteraction, by V. P. Sergeychev.  
RUSSIAN, bk, Moscow, 1964.  
\*FTD-MT-65-177

Losses in a Dielectric in a Field of Ionizing Radiation, by V. K. Zhuravlev.  
RUSSIAN, rpt, Bulletin Institute Higher Education - Physics, No 5, 1964, pp 1-86.  
\*FTD-TT-65-398

Experimental Determination of Optimum Working Frequencies in Short-Wave Communications, by V. A. Baranul'ko, 16 pp  
RUSSIAN, bk, Osobennosti rasprostraneniya radiovoln, 1964, pp 19-36.  
JPRS 29660

Voltage Transformers of Semiconductor Triodes, by Yu. K. Zakharov.  
RUSSIAN, bk, Prebrazovateli Napryazheniya na Poluprovodnikovykh Triodakh, 1964. IR 2213299164  
\*FTD-MT-65-81

Utilization of the Method of Dynamic Rigidities to the Calculation of the Natural Oscillations of Composite Shells, by L. E. Sakharov.  
RUSSIAN, rpt, Proceedings of the 4th All-Union Conference Yerevan, Armenian SSR, Oct 24-31, 1962, Yerevan, 1964, pp 861-870.  
\*FTD-MT-65-79

Scientific  
Electronics (Contd)

Radio and Radar Technology and Its Application, by K. M. Listov, K. N. Trofimov, 41 pp.  
RUSSIAN, bk, Radii i Radiolokatsionnaya Tekhnika i Ikh Primeneniye, Moscow, 1960, pp 1-423.  
FTD-MT-64-60

Radiotechnical Aids for Aircraft Navigation, by G. P. Astaf'yev, V. S. Shebshayevich, et al.  
RUSSIAN, bk, Radiotekhnicheskiye Sredstva Navigatsii Letatel'nykh Apparatov, 1962, pp 126-163; 164-240; 356-390; 391-437; 458-471; 472-496; 497-530; 573-602; 725-779; 780-823; 867-906; 907-941.  
\*FTD-MT-65-94 (Note Corrected MT Number)

Principles in the Theory of Detection of Radar Signals and Measurements of Their Parameters, by Ya. D. Shirman, V. N. Golikov.  
RUSSIAN, bk, Sovetskoye Radio, Moscow, 1963, pp 1-277.  
\*FTD-MT-65-87

Explosionproof Electrical Equipment; Manual for Oil Refining and Gas Industry, by G. A. Gel'fer, A. V. Ivanov, et al.  
RUSSIAN, bk, Vzryvozaschishchennoe Elektrooborudovanie. Spravochnik dlya Rabotnikov Nedoprazhnyayushchey i Gazovoy Promyshlennosti, 1960, 334 pp.  
CFSTI 64-11004

Modernization of Radioactivity Logging Apparatus, by M. K. Kukhanenko, Ya. N. Basia.  
RUSSIAN, bk, Yadernye Geofizika, 1961, 8 pp.  
\*AEC

New Radioactivity Logging Instruments, by Yu. A. Gulin, et al.  
RUSSIAN, bk, Yadernye Geofizika, 1961, 16 pp.  
\*AEC

Memory Devices of Electronic Digital Computers, by V. A. Prokudin.  
RUSSIAN, bk, Zapominayushchiye Ustroystva Elektronnykh Talfrovnykh Vychislitel'nykh Mashin, Moscow, 1961, pp 1-128.  
\*FTD-TT-65-550

Electromagnetic Field in the Wave Zone of a Horizontal Low-Frequency Electrical Dipole for a Three-Layer Medium, by V. I. Andreyev, 8 pp  
RUSSIAN, per, Geologiya i Geofizika, No 11, Nov 64, pp 148-153  
JPRS 29676

Clinical Syndromes Arising under the Effect of Various Radio Frequency Bands, by E. A. Drogichina and M. N. Sadchikova, 8 pp  
RUSSIAN, per, Gigiyena Truda i Professional'nyye Zabolevaniya, Vol 9, No 1, Jan 65, pp 17-21.  
JPRS 29694

Scientific  
Electronics (Contd)

New Developments in Electronic Equipment by A. Shokin, 6 pp.  
RUSSIAN, np, Izvestiya, 4 Nov 64, p. 3.  
JPRS 29941

The Propagation of Radio Waves Along the Surface of the Earth, by Ye. L. Feinberg.  
RUSSIAN, per, Izd. Ak Nauk SSSR, Moscow, 1961.  
\*FTD-MT-65-77

Determining Performance Reliability Of Medical Electronic Apparatus, by Yu. P. Sokolovskiy, 11 pp  
RUSSIAN, per, Meditsinskaya Promyshlennost' SSSR, No 2, Feb 65, pp 17-23.  
JPRS 29836

A Perfusion Pump with Bioelectric Control, by M. A. Belilovskiy, 6 pp  
RUSSIAN, per, Meditsinskaya Promyshlennost' SSSR, No 2, Feb 65, pp 58-63.  
JPRS 29838

Technology of Manufacturing Pipes and Rods From Molybdenum Disulfide, by G. V. Samonov, P. S. Kislyi, 3 pp.  
RUSSIAN, per, Onepory, No 6, 1959, pp 276-278.  
9228773  
AEC-SC-T-65-713

A Ferrite Sphere in a Coaxial Waveguide, by V. V. Maslennikova, 13 pp  
RUSSIAN, per, Radiotekhnika i Elektronika, Vol IX, No 4, Apr 64, pp 616-624  
JPRS 29774

Electron Emission From Dielectric Layers During the Presence in Them of a Strong Electrical Field (Contemporary State of the Art), by D. V. Zernov, N. L. Yasnopol'skiy, 33 pp.  
RUSSIAN, per, Radio i Elek, Vol IX, No 11, 1964, pp 1903-1919. 9696481  
FTD-MT-65-11

Experience in Use of a Frequency Selection Channel in An Airborne Magnetometer, by L. V. Vavilin and D. S. Zelenetskiy, 7 pp  
RUSSIAN, per, Razvedka i Ok'rapa Nedr, No 2, Feb 65, pp 25-29  
JPRS 29525

Propagation of Radio Waves in Irregular Terrain at 300 MC, by V. P. Mendelev, V. V. Suran.  
RUSSIAN, per, Izda. Tekhn., No 20, 1959, pp 30-41.  
\*FTD-MT-65-95

Polarographic Determination of Acrolein in the Oxidation Products of Propylene on Copper Catalysts, by V. P. Lasyuk, N. I. Popova.  
RUSSIAN, per, Uchenye Zapiski Kazansk. Univ., 1962, pp 404-408.  
\*FTD-MT-65-98

Scientific  
Electronics (Contd)

Determination of the Travel Time of Signals From Short Wave Stations From the Characteristic Distortion at the Reception Point, by N. A. Tel'pukhovskiy.  
RUSSIAN, per, Trudy Astronomicheskoy Konferentsii SSSR, Glavnaya Astronomicheskaya Observatoriya, 1963, pp 365-373.  
\*FTD-MT-65-166

New Instruments for Recording Seismic Phenomena, by Prof. Ye. A. Borisevich, 186 pp.  
RUSSIAN, per, Trudy Instituta Fiziki Zemli im. O Yu. Shmidta, No 35 (202), 3, 1964, pp. 3-143.  
JPRS 29943

Thermoelement With DC Feedback, by G. F. Appolonov, 7 pp.  
RUSSIAN, per, Trudy Inst. Politekhn. imeni M. I. Kalinina Tekh. Gidro, No 217, 1961, pp 176-179. 9696770  
FTD-TT-64-1043

Formulation of Trajectories of Air Particles With the Aid of Electronic Computers, by A. I. Burtsev, I. P. Vetlov, 15 pp.  
RUSSIAN, per, Trudy Inst. Tsentral'nyy Prognoz, No 128, 1963, pp 46-55. 9696776  
FTD-TT-64-1039

Use of Electronic Computers for Substantiation of Diagnosis, by K. Khidoyatov, 34 pp  
RUSSIAN, per, Voprosy Vychislitel'noy Matematiki i Tekhniki, No 1, 1964, pp 144-179  
JPRS 29799

The Electrical Activities, Especially the Inhibitory Action of the Calyx-Like Synapses, of a Neuron in the Trapezoid Body, by Cheng Haiang-t'ung (1728 7449 2717), 21 pp.  
CHINESE, per, K'o-hsueh T'ung-pao, No 2, 1965, pp 106-116.  
JPRS 29641

The Present State and Future Tendency of Environment Tests of Electronic Equipment, by Wu Te-pi (0702 1795 3880), 21 pp.  
CHINESE, per, K'o-hsueh T'ung-pao, No 3, 17 Mar 65, pp. 242-250.  
JPRS 30087

An Application Of the Mutual Interference Network Principle In a King Crab Eye On the Processing Of Arabic Numeral Signals, by Wan: Yun-chiu (3076 0061 0046), Cheng Chu-ying (6774 4515 5321) and Hui: Hui-ling (0186 1373 7311), 5 pp  
CHINESE, per, K'o-hsueh T'ung-pao, No 3, 17 Mar 65, pp 262-263  
JPRS 29321

Application of Insulation Materials to Electric Machines, by Hsu Hsiao-yin (1776 1321 1377), 7 pp.  
CHINESE, per, Tien Shih-chieh, No 10, 1 Oct 64, pp. 306-308.  
JPRS 29937

Scientific  
Electronics (Contd)

Principle of Spark Processing, by Lu Tsu-ting (7120 4371 7344), 9 pp  
CHINESE, per, Tien-tzu Chi-shu, No 3, 8 Aug 64, pp 17-19  
JPRS 29016

Infra-Red Ray Dryer, by Yang Hsiang-che (2799 0036 0772), 5 pp  
CHINESE, per, Tien-tzu Chi-shu, No 10, 3 Oct 64, pp 14-15  
JPRS 29713

Coherent Integrating Filter for Pulse Radar Application, by Chang Chih-Chung (1728 4160 0022), 15 pp.  
CHINESE, per, Tien-tzu Hsueh-pao, No 2, Dec 63, pp. 3-11.  
JPRS 29951

On the Application of Electrotypes on the Production of Molds, by Ho Te-ch'i (0149 6671 7371), 8 pp.  
CHINESE, per, Wu-hsien-tien Chi-shu, No 3, 11 Sep 64, pp. 36-39.  
JPRS 29968

Equivalent Circuit for Internal Discharges in a Solid Dielectric, by A. Ververka, A. Hon, 11 pp.  
CZECH, per, Acta Technica Casav, Vol VIII, No 6, 1963, pp 509-523. 9228774  
AEC-SC-T-65-705

Development of Nuclear Power Electrical Power Plants in Lenin Works in Pilsen, by J. Hauer, 18 pp.  
CZECH, per, Journal Technicky Zpravodaj, No 1, 1964, pp 1-5. 9228788  
AEC-ORNL-Tr-402

Use of an Oscillation Technique to Measure Effective Cross-Sections of Fissionable Samples in Critical Assemblies, by O. Tretjakoff, R. Vidal, et al, 33 pp.  
FRENCH, rpt, 1964. 9228606  
AEC-EURAEC-1205

The Effect of Electric Current on the Diffusion of Ions in Oxide Layers, by F. Schein, B. Le Boucher, et al, 10 pp.  
FRENCH, per, Corrosion et Anticorrosion, Vol X, No 12, 1962, pp 401-407. 9696499  
DDC R5IC-374

Environmental Effects of Atmospheric Electric Processes of Very Low Frequency, by Herbert L. Konig, 27 pp.  
GERMAN, per, Z fuer Angewandte Badar-und Klima-heilkunde, Vol LX, No 5, 1962, pp 581-591. 9696509  
Amer Meteorol Soc  
T-C-232

Adjustable Electric Resistor, by Rheinmetall-Borsig A.G.  
NORWEGIAN Patent No 67,845.  
Patent Office

Paper Capacitors Impregnated With Epoxy Resins, by J. Medowski.  
POLISH, per, Prace Instytut Tele- i Radiotech, Vol VIII, No 1 (26), 1964, pp 61-72.  
\*AEC

Scientific  
Electronics (Contd)

Survey Article on High-Reliability Electron Tubes, 10 pp.  
POLISH, per, Przegląd Elektroniki, No 1, 1964, pp 149-150.  
AEC-T-55587  
AEC-ORNL-35404

Application of the Universal Computer UMC-1 to Prognosis of a Group of Hydrological Phenomena, by K. Krajewski, 10 p.  
POLISH, per, Przegląd Geofizyczny, Vol 7, No 2, 1962, pp 85-94.  
\*CFSTI 65-50395

Asynchronous and Asynchronous Motors, by A. Nicolaide.

RUMANIAN, per, Electrotechnica, Vol XII, No 10, 1964, pp 361-368.  
\*FTD-TT-65-554

Asynchronous Motor and Rotor for Ferro-Magnetic Masses, by V. D. Savluc.  
RUMANIAN, per, Electrotechnica, Vol XII, No 10, 1964, pp 368-382.  
\*FTD-TT-65-554

A New Setup for the Measurement of the Power During Ionization Processes, by A. Veverka, J. Chladek, 17 pp.  
SWISS, per, Bulletin of the Swiss Electrical Association, Vol XLIX, No 2, 1958, pp 45-50. 9228614  
AEC-SC-T-65-712

Engineering

Mechanisms for the Generation of Plane Curves; by I. I. Artobolevskiy.  
RUSSIAN,  
Mergamon Press

Structure Analysis by Electron Diffraction; by B. K. Vainshtein.  
RUSSIAN,  
Mergamon Press

Measurement Equipment and Methods for Rocket Testing, by A. V. Kantor, 301 pp.  
RUSSIAN, bk, Apparatura i Metody Izmereniy pri Ispytaniyakh Rakety, 1963, pp 2-517.  
JPRS 29603

Soviet Hydro Engineering: A Classified Collection of Research Reports.  
RUSSIAN, bk, Annotatsii Zakonchennykh v 1958 Godu Nauchno-issledovatel'skikh Rabot po Gidrotekhnike, 1959, 518 pp.  
CFSTI 65-11159

Scientific  
Engineering (Contd)

Automatic Correlators and Their Application,  
by B. S. Sinitsyn.

RUSSIAN, bk, Avtomaticheskkiye Korrelyatory i ikh Primeneniye, 1964, 215 pp.  
\*FTD-MT-65-179

Semiconductors and their Application in  
Engineering, by I. Voloshin,  
M. Doroshevich, et al.

RUSSIAN, bk, Poluprovodniki i ikh Primeneniye v Tekhnike, 1963, pp 7-287.  
\*FTD-MT-65-146

Semiconductor Nuclear Particle Counters, by  
S. M. Ryvkin, O. A. Matveyev.

RUSSIAN, rpt, Poluprovodnikovyye Schetchiki Yadernykh Chastits, No 10, 1964, pp 1-40  
\*FTD-MT-65-138

Spectrum of Set Noises and Spread of the  
Amplification Factor in Multi-Stage Image  
Converters, by B. A. Demidov, G. E. Smolkin, et al.  
RUSSIAN, rpt, Spektr Sobirvennykh Shumov i Dispersiya Koeffitsienta Usileniya Mnogostadiykh Elektronno-Opticheskikh Preobrazovatelei, Moscow, 16 pp.  
\*AEC

Instrumentation for Deformation Measurement  
by Wire-Type Strain Gages, by  
V. V. Kedocov, M. B. Karvatskiy.  
RUSSIAN, bk, Tsentral'nyy Aerovidrodinamicheskiy Institut.

\*FTD-MT-65-135

Mercury Gear Pump, by L. I. Gel'man, A. N. Gasilovskiy  
and I. Z. Kopp, 6 pp.  
RUSSIAN, bk, Zhidkiye Metally--Sbornik Statey, 1963,  
pp. 320-325.  
JPRS 29916

Increasing the Reliability and Life of Machines,  
by I. Artobolevskiy, A. Berg, A. Blagonravov, and  
N. Bruyevich, 10 pp.  
RUSSIAN, np, Ekonomicheskaya Gazeta, No 2, (179)  
13 Jan 65, p 6.  
JPRS 29905

Need for a More Reliable System of Estimating  
Longevity of Motor-Vehicle Engines, by P.  
Chervonobrodov, 5 pp.  
RUSSIAN, np, Ekonomicheskaya Gazeta, No 2, 13 Jan  
65, p 14.  
JPRS 29618

A New Rhythm System for Conveyor Belts, by I.  
Karpenko, 5 pp.  
RUSSIAN, np, Ekonomicheskaya Gazeta, No 8, 24 Feb  
1965, p 10.  
JPRS 29611

Scientific  
Engineering (Contd)

Electric Machines With Evaporization and  
Universal Cooling Systems for Flying  
Machines, by V. A. Vinokurov,  
F. I. Golgofskiy, 8 pp.  
RUSSIAN, per, Elektrotehnika, No 1, 1965,  
pp 5-7. 9696630  
FTD-TT-65-290

Determination of the Frequency of Bending Vibrations  
in Rotating Twisted Blades, by A. Ye. Shneydman,  
A. V. Trezhetsinskiy and L. I. Lupilov, 12 pp.  
RUSSIAN, per, Energomashinostroyeniye, No 3, 1964,  
pp 8-12.  
JPRS 29615

Vibration of the Turbine Blades of Turbocompressors,  
by Engineer R. S. Deych, 10 pp  
RUSSIAN, per, Energomashinostroyeniye, No 4, Apr 64,  
pp 25-27.  
JPRS 29718

Effect of the Fit of Disks and Bushings on the  
Bending and the Critical Speed of a Turbine Rotor,  
by Engr. V. Ya. Kal'mens, 8 pp  
RUSSIAN, per, Energomashinostroyeniye, No 4, Apr 64,  
pp 28-30.  
JPRS 29718

Investigation of Pulse Distortions of Turbine  
Blades Using the Wave Method, by A. A. Moiseyev,  
A. A. Petrov and O. I. Mikhaylov, 11 pp  
RUSSIAN, per, Energomashinostroyeniye, No 7,  
July 64, pp 19-21.  
JPRS 29566

Thermodynamic Functions of a Gas Mixture at  
Elevated Temperatures, by R. M. Sevast-yanov,  
M. D. Zdzunkovich.  
RUSSIAN, per, Inzhen Zhur, Vol IV, No 4, 1964,  
pp 639-645.  
\*NASA TT F-9343

Engineers of the 20th Century, by V. Smirnov, 5 pp.  
RUSSIAN, np, Izvestiya, 15 Dec 64, p. 5.  
JPRS 29944

Investigation of Three-Dimensional Photoelastic  
Models, by Kh. K. Aben.  
RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,  
Mekh i Mash, No 4, 1964, pp 41-46.  
NASA TT F-9290

Determination of the Aerodynamic Damping Moment  
by the Method of Two-Phase Sustained Oscillations,  
by V. B. Petrushin.  
RUSSIAN, per, Iz Ak Nauk SSSR, Seriya Mat i Mekh i Astro, Vol XIX, No 4, 1964, pp 133-145.  
\*AEC

A Certain Property of Gyroscopic Stability of  
a Controlled Conservative Mechanical System,  
by N. N. Kravetskiy.  
RUSSIAN, per, Iz Ak Nauk SSSR, Tekh Kibernet,  
No 5, 1964, pp 156-164.  
\*NASA TT F-9324

Scientific  
Engineering (Contd)

Certain Engineering Physical Problems in the Design of Radiation-Chemical Equipment, by N. P. Syrkus, 18 pp.  
RUSSIAN, per, Kham Prom, No 2, 1964, pp 134-141.  
9228775  
AEC-Tr-6539

Problems Of the Application of Technical Cybernetics in Power Engineering, by G. Agents, 5 pp  
RUSSIAN, np, Kommunist, 3 Dec 64, p 3.  
JPRS 29030

Patent Information in the Design Bureau, by V. I. Kopitsyn, 17 pp.  
RUSSIAN, per, Nauchno-Tekhnicheskaya Informatsiya, No 11, 1964, pp. 13-19.  
JPRS 30063

On the Improving of Agglomerates for Blast Furnaces by S. Akhmatov, 5 pp.  
RUSSIAN, np, Pravda Ukrainy, 19 Feb 1965, p 2.  
JPRS 29600

Replacement of Cupola Furnaces with Electric Induction Furnaces Advocated, by V. Volosenkov, 6 pp  
RUSSIAN, np, Sovetskaya Belorussiya, 22 Jan 65, p 2.  
JPRS 29723

Concreting in Freezing Weather, by Yu. Maksimov, 5 pp  
RUSSIAN, np, Stroitel'naya Gazeta, No 14, 3 Feb 65, p 2.  
JPRS 29667

Experimental Studies of Noise Suppressors For General Marine Ventilators, by V. F. Lyusov, 10 pp  
RUSSIAN, per, Sudostroyeniye, No 2, Feb 60, pp 29-33.  
JPRS 29823

Calculating the Noise of Ventilation Air Ducts in Ship's Quarters, by Engineer V. M. Olisov, 11 pp.  
RUSSIAN, per, Sudostroyeniye, No 3, Mar 61, pp. 24-27  
JPRS 30053

Investigation of Peripheral Cross Section of Rotor Blades in Terminal Stages of PVK 150 Turbines by G. A. Sokolovskiy.  
RUSSIAN, per, Teploenergetika, No 1, 1956, pp 39-43  
\*FTD-TT-65-461

Investigation of Axial Radial Type Compressors with Blade Diffusers by A. N. Sherstyuk.  
RUSSIAN, per, Teploenergetika, No 1, 1956 pp 43-47  
\*FTD-TT-65-461

Problem of Designing Reverse Direction Apparatus in a Centrifugal Compressor by S. P. Livahits.  
RUSSIAN, per, Teploenergetika, No 1, 1956, pp 54-58  
\*FTD-TT-65-461

Scientific  
Engineering (Contd)

Reducing the Results of Experiments on Power Gas Turbine Plants to the Reference Conditions b G. G. Ok'Khovskiy.  
RUSSIAN, per, Teploenergetika, No 12, 1964, pp 53-56  
\*FTD-TT-65-460

Delays In Installing A Blast-Furnace Turbine, by V. Syromyatnikov, 5 pp.  
RUSSIAN, np, Trud, 26 Mar 65, p. 2.  
JPRS 30142

Some Cartographic Problems In Compiling Bathymetric Charts, by A. V. Pavlova, 9 pp  
RUSSIAN, per, Vestnik Leningradskogo Universiteta, No 24, Series Geology and Geography, No 4, 1964, pp 153-157.  
JPRS 29551

Theoretical Mechanics: A Cornerstone of Engineering Education, by Professor V. N. Shchekachev, 9 pp.  
RUSSIAN, per, Vestnik Vysshey Shkoly, No 5, 1964, p 20-25.  
JPRS 29588

"Theoretical Mechanics" and Modern Engineering, by Professor A. I. Lur'ye, 6 pp.  
RUSSIAN, per, Vestnik Vysshey Shkoly, No 5, 1964, pp 25-29.  
JPRS 29588

In Defense of the Multiple Choice Response Feedback System, by Docent N. V. Volodin, 6 pp.  
RUSSIAN, per, Vestnik Vysshey Shkoly, No 5, 1964, pp 33-36.  
JPRS 29588

Laboratory Exercises in a Modern Course in Theoretical Mechanics, by V. F. Groza, L. I. Jhteinvol'f, G. Ya. Golovnin, and M. A. Avtukhov, 11 pp.  
RUSSIAN, per, Vestnik Vysshey Shkoly, No 10, 1964, pp 12-19.  
JPRS 29639

Design of Laboratory Building of Chungking Municipal Institute of Agricultural Science, by Lin Ch'ing-hsiang (2651 7234 4161), 11 pp.  
CHINESE, per, Chien-chu Hsueh-pao, No 11-12, 1964, 25 Dec 64, pp. 14-16.  
JPRS 29933

Design of the Chen-Chiang Agricultural Machinery College, by Li Lien-hsia (2621 5571 7209), 6 pp.  
CHINESE, per, Chien-chu Hsueh-pao, No 11-12, 1964, 25 Dec 64, pp. 20-21.  
JPRS 29933



Scientific  
Engineering (Contd)

Techniques in Experimental Manufacturing of Carbon Dioxide Compressors, 19 pp.  
CHINESE, per, Shanghai Ch'iahsieh, No 10, 25 Oct 64, pp 6-9.  
JPRS 29685

Perspectives on Nuclear Electrical Power Plants in Czechoslovakia, by Vaclav Chlumsky, Arnost Komauk, 10 pp.  
CZECH, per, Journal Technicky Zpravodaj, No 1, 1964, pp 6-9. 9228792  
AEC-ORNL-Tr-403

Special Equipment for the Welding of the Reactor Vessel of the First Czechoslovak Atomic Power Plant, by Richard Kotora, Miloslav Krot, 11 pp.  
CZECH, per, Journal Technicky Zpravodaj, Vol 1, 1964, pp 33-39. 9228598  
AEC-ORNL-Tr-408

Industrial Metrology Effect of Temperature on the Calibration of Standards, by Paul Grand, 91 pp.  
FRENCH, per, Revue Generale de Mechanique, Vol XXXIX, XL, 1955, 1956. 9228800  
AEC-UCRL-Tr-1145(L)

Pressure Vessels, by K. A. Trickett, et al.  
FRENCH, Patent No 1,343,789.  
\*AEC

Lubrication Problems in Highly Supercharged Diesel Engines, by Walter Bauer, 11 pp.  
CONFIDENTIAL  
GERMAN, rpt, Schiffbautechnische Gesellschaft, No 1964.  
DIA 5317005465

Comparison of the Topatron and Omegatron Partial Pressure Measuring Devices, by G. Reich, N. G. Noller.  
GERMAN, rpt, Transactions of the Eighth Vacuum Symposium and Second International Congress, Washington, D.C., 16-19 Oct 1961, pp 560-566.  
NASA TT F-9288

A New Method of Differential Rectification, by Otto Weibrecht, 29 pp.  
GERMAN, rpt, Veb Carl Zeiss Jena, 14 pp. 9696772  
FTD-TT-65-243

Karlsruhe Reprocessing Installation.  
GERMAN, rpt, Wiederaufarbeitungsanlage Karlsruhe, Leopoldshafen, 1965, 31 pp.  
\*AEC

Multi-Layer Plastic Materials and Laminated Insulating Materials for Electrical Engineering, by E. Rulker, 10 pp.  
GERMAN, per, Elektrie, No 2, Feb 65, pp 68-71.  
JPRS 29679

Automation of Blast Furnace Charging and Burden Distribution, by M. Lovenstein.  
GERMAN, per, Stahl und Eisen, Vol LXXXIV, 1964, pp 36-38.  
BISI 3586

Scientific  
Engineering (Contd)

Influence of System Geometry and Operating Conditions on the Sensitivity of a Bayard-Alpert Gauge, by H. J. Schutze, F. Stork.  
GERMAN, per, Vakuum Technik, Vol XI, No 5, 1962, pp 133-141.  
\*NASA TT F-9361

Comparative Measurements Between an Omegatron and a Bayard-Alpert Gauge, by L. A. Petermann.  
GERMAN, per, Vakuum Technik, Vol XI, No 7, 1962, pp 200-204.  
\*NASA TT F-9360

The Durational Development of the Townsend Discharge Up to the Point of Breakdown, by W. Kehrman.  
GERMAN, per, Z fuer Naturforschung, Vol XXII, 1964, pp 926-933.  
\*AEC

Method and Apparatus for Reactor Safety Control, by Norman E. Huston, R. G. Hoff, et al.  
GERMAN, Patent No 1,038,948.  
\*AEC

New Pneumatic Equipment, by Bela Laszlo.  
HUNGARIAN, per, Meres es Automatika, Vol X, No 7, 1962, pp 194-198.  
\*AEC

A Reliable Cistern.  
ITALIAN, per, Rivista Bimestrale, Gruppo IV Anno XVII, No 5, Jun 1964, p 26.  
\*ACGI I-6658  
ID 2204007565

Control Effects on the Elastic Blades of a Helicopter Rotor, by A. Marinescu.  
ITALIAN, per, Studi di Cercetari de Mecanica Aplicata, Vol XIV, No 5, 1963, pp 1073-1088.  
\*NASA TT F-9371

Neutronic Reactor Control Element.  
ITALIAN, Patent No 618,925.  
\*AEC

Study of the "Loudness Time Trade Relationship" and Phase Rotation in Binaural Judgement of Direction, by A. Aszi, A. Ottaviani.

ITALIAN, per, Arch. Ital. di O.R.L., Vol LXXIII, No. 4, 1962, pp 590-594.  
CacL

Method and Apparatus for Reactor Safety Control.  
JAPANESE, Patent No 271,910.  
\*AEC

Reactor Control.  
JAPANESE, Patent No 276,740.  
\*AEC

Scientific  
Engineering (Contd)

Shipping Container for Radioactive Materials.  
JAPANESE, Patent No 409,289.  
\*AEC

Blast Yield Meter.  
JAPANESE, Patent No 410,184.  
\*AEC

Control Rod.  
JAPANESE, Patent No 413,628.  
\*AEC

Cruciform Control Rod Joint.  
JAPANESE, Patent No 418,038.  
\*AEC

Nuclear Reactor Core Design.  
JAPANESE, Patent No, 556,277.  
\*AEC

Modern Fishing Boats, by  
Grzywaczewski Zbigniew, 344 pp.  
POLISH, bk, Wspokzesne Statki Rybackie  
1959.  
CFSTI 61-11362

Roads in Yugoslavia and Streets in Budapest  
Observed by a Civil Engineer Visiting These  
Countries as a Tourist, by M. Skulawski,  
11 pp.  
POLISH, per, Drogownictwo, No 12, 1964,  
pp 291-295.  
ACSI 1-6653  
ID 2204007365

About a Certain Case of Considerable Flow  
Through Capacity of a Grid of Control Blades,  
by J. Krzyzanowski, B. Weigle, 16 pp.  
POLISH, per, Prace Inst Maszyn Przeplywowych,  
No 13, 1963, pp 3-16. 9696771  
FTD-TT-64-1041

Plier-type Tool, by Heinrich Zenhausern.  
SWISS, Patent No 376,845.  
Patent Office

Scientific  
Fuels & Propulsion

The Decomposition of a Viscous Fuel Film in Air,  
by A. S. Lyshevskiy, 13 pp.  
RUSSIAN, per, Trudy Novocherkasskogo Politekh  
Institut, No 33/47, 1956, pp 228-238. 9227377  
NASA TT F-335

The Coefficient of Free Turbulence in a  
Jet of Atomized Liquid Fuel, by  
A. S. Lyshevskiy, 11 pp.  
RUSSIAN, per, Trudy Novocherkasskogo  
Politekh Institut, No 33,47, 1956,  
pp 239-248. 9227314  
NASA TT F-351

Service Experience With Ring Roll Mills,  
by G. Westheff.  
GERMAN, per, Energie, Vol XVI, No 2, 1964,  
pp 1-8.  
BISI 3937

Operation of an Exhaust Driven Turbine in a  
Steady Flow, by Takashi Yano.  
GERMAN, per, Motorische Zeitschrift  
Rundschau, Vol XXVI, No 1, 1963, pp 29-30.  
\*NASA TT F-9362

Materials & Metallurgy

Corrosion of Metals and Alloys.  
RUSSIAN, bk.  
National Lending Library

Aspects of Theoretical Mineralogy in the USSR,  
Moscow, Collection of papers.  
Foreigner Press

Electrodeposition of Alloys, by V. A. Avarkin.  
RUSSIAN, bk, Elektroliticheskie Osazhdeniye  
Splavov, 1961, 201 pp.  
CFSTI 64-11015

Soviet Synthetic Fibers and Their World-  
Wide Equivalents, 37 pp.  
RUSSIAN rpt, Identification of Chemical  
Fibers, Moscow, 1963.  
Naval Sci and Tech Intel Ctr  
Tr 64-41

Metallurgy of Rare Metals, by A. N. Zelikman,  
O. Ye. Kreyn, et al.  
RUSSIAN, bk, Metallurgiya Redkikh Metallov,  
Moscow, 1964, 568 pp.  
\*NASA TT F-359  
CFSTI 65-50137

Scientific  
Materials & Metallurgy (Contd)

Vacuum Diffusion Welding of High-Melting Metalloid Compounds with High-Melting Metals, 11 pp  
RUSSIAN, bk, Novyye Materialy v Mashinostroyenii, 1964, pp 124-134  
JPRS 29550

Radiation Protecting Action of Cyanogen Compounds, by V. D. Rogozkin, et al.  
RUSSIAN, bk, Radiozashchitnoye Deyatviye Tsianistykh Soyedineniy Amigdalii, Moscow, 1963, pp 24-65; 118-132.  
NASA TT F-9259

Joint Plastic Deformation of Dissimilar Bodies, by G. E. Arkulis, 272 pp  
RUSSIAN, bk, Sovmestnaya Plasticheskaya Deformatsiya Raznykh Metallov, 1964, pp 1-271.  
JPRS 29090

Strongyloids of Animals and Man, by T. I. Popova.  
RUSSIAN, bk, Strongyloidi Zhivotnykh i Cheloveka, 1955, 236 pp.  
CFSTI 64-11008

Solders Composed Of Noble Metals and Alloys, by V. A. Golovin and E. Kh. Ul'yanova, 15 pp.  
RUSSIAN, bk, Svoystva Blagorodnykh Metallov i Splavov, 1964, pp. 169-180.  
JPRS 30064

Technology of Carbon and Graphite Materials, by Ye. F. Chalykh.  
RUSSIAN, bk, Tekhnologiya Uglegrafitovykh Materialov, Moscow, 1963, 304 pp.  
\*FTD-MT-65-132

Titanium and Its Alloys. Investigation of Titanium Alloys, by I. I. Kornilov, et al.  
RUSSIAN, bk, Titan i Ego Splavy. Issledovaniya Titanovykh Splavov, Moscow, 1963, 367 pp.  
\*NASA TT F-362  
CFSTI 65-50139

Influence of Liquid Sodium on Relaxation of Stresses in Steel, by V. I. Nikitin, 8 pp.  
RUSSIAN, bk, Zhidkiye Metally--Sbornik Statey, 1963, pp. 300-306.  
JPRS 29916

Centrifugal Laboratory Pumps for Transferring Liquid Metals, by A. A. Andreyevskiy and D. M. Kalachev, 7 pp.  
RUSSIAN, bk, Zhidkiye Metally--Sbornik Statey, 1963, pp. 313-319.  
JPRS 29916

Use of Glass as a Technological Lubricant for Hot Rolling, by U. I. Suyarov, V. P. Korzh, et al.  
RUSSIAN, per, Akad. Nauk SSSR, Ural'skii Filial, Trudy Inst Met., No 9, 1962, pp 83-86.  
BISI 4158

Scientific  
Materials & Metallurgy (Contd)

An Apparatus for the Determination of the Softening Temperatures of Blast-Furnace Burden Materials, by Z. I. Nekrasov, N. A. Gladkov, et al.  
RUSSIAN, per, Akad. Ukrain, SSR, Trudy Inst. Chern. Met., Metallurgiya Chuguna, Vol 12, 1960, pp 163-168.  
BISI 3962

Clogging up of Casting Nozzles in Continuous Casting, by E. I. Isaev.  
RUSSIAN, per, Article taken from a Bound Symposium entitled THE METALLURGY OF STEEL and held under the auspices of the Zhdanov Metallurgical Institute and published by Metallurgizdat, 1961, pp 169-177.  
BISI 4042

Electron-Beam Welding of Chromium, by S. M. Gurevich and G. K. Kharchenko, 6 pp  
RUSSIAN, per, Avtomaticheskaya Svarka, No 12, Dec 62, pp 56-59.  
JPRS 29012

On the Texture of Electrodeposited Tin, by N. Pangarov, V. Mikhailova.  
RUSSIAN, per, Doklady Akademii Nauk SSSR, Vol 153, No 5, 1963, pp 1119-1121.  
BISI 3806

Study of the Dynamics of Salt Transfer in Porous Media, by V. V. Rachinskiy, Chia Ta-Ling, et al, 21 pp.  
RUSSIAN, per, Fizika i Khimiya, Vol 2, No 45, 1962, pp 165-183.  
CFSTI 64-11085

Influence of Alloying on the Thermal Expansion of Titanium, by S. F. Kovtun and R. A. Ul'yanov, 8 pp  
RUSSIAN, per, Fizika Metallov i Metallovedeniye, Vol 17, No 2, Feb 64, pp 263-265.  
JPRS: 29652

Effect of Alloying on the Electrical Resistivity of Titanium, by R. A. Ul'yanov and S. F. Kovtun, 3 pp  
RUSSIAN, per, Fizika Metallov i Metallovedeniye, Vol 17, No 4, 1964, pp 505-511.  
JPRS 29652

Elastic Constants of Titanium-Niobium Alloys, by S. G. Fedotov and O. K. Belousov, 7 pp  
RUSSIAN, per, Fizika Metallov i Metallovedeniye, Vol 17, No 5, May 1964, pp 732-736.  
JPRS 29652

Scientific  
Materials & Metallurgy (Contd)

High-Temperature Thermochemical Treatment of Metals and Alloys, by Ye. N. Sokolov and V. D. Sadovskiy, 22 pp.  
RUSSIAN, per, Fizika Metallov i Metallovedeniye, Vol XIX, No 2, 1965, pp 220-240  
JPRS 29034

Properties of Some Niobium Alloys Produced by Electron Beam Melting, by I. S. Malashenko, 8 pp.  
RUSSIAN, per, Fiziko-Khimicheskaya Mekhanika Materialov, Vol 1, 1965, pp. 67-72.  
JPRS 30,100

Experimental Data To Substantiate the Maximum Permissible Concentration Of Beryllium In the Water Of Reservoirs, by L. A. Sazhina, 10 pp  
RUSSIAN, per, Gigiyena i Sanitariya, No 2, Feb 65, pp 10-16.  
JPRS 29049

Mechanism of the Removal of Non-Metallic Inclusions from Drops of Steel During Their Movement in a Slag, by V. V. Khlynov; O. A. Esin, et al.  
RUSSIAN, per, Izv. An SSR, Met. Gornoe Delo, No 2, 1964, pp 26-30.  
BISI 4160

Structure of a Capped Ingot of Rimming Steel, by R. Z. Elimelakh.  
RUSSIAN, per, Izv. VUZ Chern. Met., No 12, 1963, pp 45-53.  
BISI 4034

Distribution of Oxygen Between Metal and Slag During Steel-Melting Processes, by A. I. Stroganov.  
RUSSIAN, per, Izvest. VUZ-Chernaya Met., No 3, 1963, pp 46-52.  
BISI 3872

Oxidizing Power of 500-Ton Open Hearth Furnaces in the Melting Period, by M. A. Glinkov, E. A. Stul'pin.  
RUSSIAN, per, Izvest. VUZ-Chernaya Met., No 1, 1964, pp 174-177.  
BISI 3964

Carbon Consumption in the Blast Furnace, by V. I. Korobov.  
RUSSIAN, per, Izvest. VUZ-Chernaya Met., No 7, 1964, pp 29-35.  
BISI 3890

Oxidation of Carbon in a Steel Furnace Bath, by P.G. Terziyan, E.V. Abrosimov, et al.  
RUSSIAN, per, Izvest. VUZ-Chernaya Met., No 7, 1964, pp 63-68  
BISI 3891

Scientific  
Materials & Metallurgy (Contd)

The Effect of Vibration Processes on the Work of the Chains of Tube Drawing Machines, by E.V.Pal'mov; V.I.Ural'skii.  
RUSSIAN, per, Izv. VUZ-Chern. Met., Aug 1964, pp 195-200.  
BISI 4006

Kinetics of the Solution of Carbon and Recrystallization of Industrial Iron, by G. K. L'vov, V. I. Motyazhev.  
RUSSIAN, per, Izv. VUZ, Chern Met., No 8, 1963, pp 128-131.  
BISI 3875

Calculation of Oxygen Converter Melt Coolants, by O. N. Kostenetskii.  
RUSSIAN, per, Izv. VUZ-Chern. Met., Vol 2, 1964, pp 64-72.  
BISI 4190

Electrochemical Interaction Between Metallic Iron and Liquid Slags, by S. E. Vaisburd, V. L. Khmel'ta.  
RUSSIAN, per, Iz Vysshikh Ucheb Zaved. Tsvet Metall, Vol II, No 6, 1959, pp 76-84.  
\*AEC

The Effect of Hydrogen on the Mechanical Properties of Titanium and the OT-1 Alloy, by V. A. Livanov, et al.  
RUSSIAN, per, Iz Vysshikh Ucheb Zaved. Tsvet Metall, Vol VII, No 4, 1964, pp 124-129.  
\*NASA TT F-9365

Design Strength of Heat-Treated Titanium Alloys, by S. G. Glazunov, A. I. Khorev, and V. N. Moiseyev, 6 pp  
RUSSIAN, per, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 6, Jun 64, pp 2-5.  
JPRS 29652

Composition and Structure of Titanium Alloy Ingots in the Shrinkage Cavity Zone, by L. A. Yelagina, 8 pp.  
RUSSIAN, per, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 6, Jun 64, pp 23-27.  
JPRS 29652

Features of the Spectrographic Determination of Nitrogen and Oxygen in Steels, by N.V. Buyanov; L.M. Fedorova.  
RUSSIAN, per, Noviye metody Ispytanii Metallov, No 24, 1962, pp 105-111.  
BISI 4121

New Method for Determining the Values of the Test Pressures of Metal Tubes, by L. E. Terletsii.  
RUSSIAN, per, Novoe v Stroitel'noi Tekhnike. Stroitel'nye Konstruktsii, Ser. XVI, 1962, pp 152-160.  
BISI 4005

Scientific  
Materials & Metallurgy (Contd)

Increasing the Strength and Reducibility of Sinter, by V. Ya. Miller, P.A. Lyakhov. RUSSIAN, per, Obozashchenie Rud., No 6, 1963, pp 27-31. BISI 3968

Service of Zirconium-containing Nozzles for Continuous Casting of Steel, by N.V. Pitak; M.E. Drizheruk. RUSSIAN, per, Ogneupory, Vol 29, No 6, 1964, pp 264-269. BISI 4083

Measurement of the Mechanical and Dynamical Characteristics of Rubber, by V. P. Veledin, E. V. Khvachinskiy. RUSSIAN, per, Pribery i Tekh Ekspert, No 2, Mar, Apr 1957, pp 94-97. \*ABC

New Types of All-Metal Elastic-Damping Elements, Their Preparation and Application, by A. M. Soyfer, V. N. Buzitskiy, 10 pp. RUSSIAN, per, Rasseyaniye Energii pri Kolebaniyakh Uprugikh Sistem, Ak Nauk UKSSR, 1963, pp 269-275. 9696623 FTD-TT-64-1033

Methods of Minimising the Scrap Resulting from the Embrittlement of Annealed High Speed Steel, by A.A. Badaeva; E.I. Malinkina. RUSSIAN, per, Stanki i Instrument, Vol 28, No 2, 1951. BISI 4090

Fine Machining of Free-cutting Steel With High Speed Cutting Tools, by B. Vlach. RUSSIAN, per, Strojirenstvi, No 1, 1964, pp 39-43. BISI 4193

Welding Titanium Alloys with Nickel-Base Alloys, by I. G. Gorin, 11 pp. RUSSIAN, per, Svarochnoye Proizvodstvo, No 12, Dec 64, pp 25-28. JPRS 29652

Chloride Volatilization Adapted to Pyrite Ash From Ore From the Nikolaevsk Deposit, by E. I. Kuzhakhmetov et al. RUSSIAN, per, Transactions of the Altai Mining and Metallurgical Scientific Research Institute of the Academy of Sciences of the Kazakh S.S.R., Vol XIV, 1963, pp 66-74. \*BISI 4195

Scientific  
Materials & Metallurgy (Contd)

Investigation of Technological Lubricants Based on Salt Mixture for Hot Rolling of Pipe, by G. A. Rodionova, Ya. S. Finkel'shteyn. RUSSIAN, per, Trudy Inst Fiz Khim, Ak Nauk SSSR, 1963, pp 124-135. \*FTD-MT-65-118

Investigating Oxidations of Niobium-Titanium-Zirconium Alloys, by D. A. Prokoshkin, Ye. V. Vasil'yeva, 8 pp. RUSSIAN, per, Trudy Inst Metallur Metallo, Fiziko-Khim Metody Issled, No 13, 1963, pp 157-162. 9696778 FTD-TT-64-1037

Studying Mechanical and Thermal Fatigue of Metals by the Internal Friction Method, by V. S. Postnikov, I. V. Zolotukhin, 13 pp. RUSSIAN, per, Trudy Inst Metallur im A. A. Baykova Tsiklicheskaya Prochnost Metallov, 1962, pp 218-226. 9696774 FTD-TT-64-1046

Comparative Evaluation of Methods for the Determination of Si in Chrome Nickel Steels, by A. S. Androyev. RUSSIAN, per, Trudy Leningrad Politekh Inst, No 201, 1959, pp 24-34. \*BISI 4141

Investigation of the "Ti-Al-Mo-Fe" System of Alloys, by A. I. Khorev and V. N. Moiseyev, 8 pp. RUSSIAN, per, Tsvetnyye Metally, No 1, 1965, pp 64-69. JPRS 29574

The Nature of Plastic Deformation in Titanium Alloys Under Different Types of Stress, by L. P. Odinkova and I. N. Bogachev, 10 pp. RUSSIAN, per, Tsvetnyye Metally, No. 2, Feb 1965, pp 71-77. JPRS 29634

The Electron Beam in Modern Vacuum Metallurgy, by B. Ye. Paton and B. A. Movchan, 8 pp. RUSSIAN, per, Vestnik Akademii Nauk SSSR, No 1, Jan 65, pp. 25-29. JPRS 29917

The Industrial Possibilities of Lasers, by V. S. Zuyev, 7 pp. RUSSIAN, per, Vestnik Akademii Nauk SSSR, No 1, Jan 65, pp. 37-41. JPRS 29917

Methods of Improving the Top Pouring of Steel, by V. A. Efimov, et al. RUSSIAN, per, Voprosy Proizv. Stali. Otdel. Tekh. Nauk, No 9, 1963, pp 79-95. BISI 4153

Scientific  
Materials & Metallurgy (Contd)

Amalgam Polarography with Accumulation.  
Polarographic Behavior of Germanium, by O. S. Stepanova, M. S. Zakharov, and L. F. Trushina, 13 pp.  
RUSSIAN, per, Zhurnal Analiticheskoy Khimii, Vol 20, No 2, 1965, pp 153-160.  
JPRS 29732

Coulometric Titration of Iridium(IV) with Electrogenerated Copper (I) in the Presence of Rhodium (III), by N. I. Stenina and P. K. Agasyan, 6 pp.  
RUSSIAN, per, Zhurnal Analiticheskoy Khimii, Vol 20, No 2, 1965, pp 196-199  
JPRS 29732

Expeditions in Search of Uranium in the Wadis of the Desert, by Sa'id 'Abd al-Ghani and Sami Mutawalli, 6 pp.  
ARABIC, per, Al-Ahram, 8 Apr 65, p. 3.  
JPRS 30059

Extraction of Germanium, by Kuo Kung-i (6753 0361 3015) and Ch'en Yu-li (7115 3768 5461), 18 pp.  
CHINESE, per, Hua-hsueh T'ung-pao, No 3, Mar 65, pp.36-42.  
JPRS 30087

Ring Oven Technique for the Isolation and Detection of Thorium and Zirconium, by Shen Shih-nien (3088 4258 1629) Keng Hsin-tu (5105 0207 4648) and K'ang Ting-hsueh (1660 1352 1331), 5 pp.  
CHINESE, per, Hua-hsueh T'ung-pao, No 3, Mar 65, pp. 59-60.  
JPRS 30087

New Developments in Planetary Rolling Mills, by Hu Hsing, 6 pp.  
CHINESE, per, K'o-hsueh Hua-pao, No 7, July 64, pp 264-265.  
JPRS 29564

Fundamental Characteristics of Mineralization  
Conditions of China's Important Mineral Deposits, by Kuo Wen'k'uei (6753 2429 7603), 24 pp.  
CHINESE, per, K'o-hsueh T'ung-pao, No 3, 17 Mar 65, pp 189-201  
JPRS 29321

The Study of the Method of  $\gamma$  Spectrum for the Analysis of Low Uranium-, Thorium-Containing Substances, by Hsia Ming (1115 2494) Tsung P'u-huo (1350 2528 0735), Wu Shu-pen (0702 2579 2609), 9 pp.  
CHINESE, per, K'o-hsueh T'ung-pao, No 3, 17 Mar 65, pp. 259-261.  
JPRS 30087

Scientific  
Materials & Metallurgy (Contd)

The Vapor Pressure Of A Melt  $\text{SnCl}_2\text{-KCl}$ , by P'eng Jui-wu (1756 3343 0124) and Ch'en Tzai-yao (7115 5261 1202), 6 pp.  
CHINESE, per, K'o-hsueh T'ung-pao, No 3, 17 Mar 65, pp 268-270.  
JPRS 29321

Production and Application of Powder Metallurgy Machine Parts in China, by Chung Wen-chih, 14 pp.  
CHINESE, per, Shang-hai Chi-hsieh, No 9, 1964, 25 Sept 64, pp 24-28.  
JPRS 29564

Apparatus for Purifying Inert Gases From Oxygen, by J. Tenygl.  
CZECH, per, Chem. Listy, Vol 58, No 5, 1964, pp 573-576.  
BISI 4100

Highly Refractory Metal Materials for Electrothermal Technique, by Z. Ryska, 9 pp.  
CZECH, per, Electrotechnicky Obzor, Vol LIII, No 1, 1964, pp 22-25. 9696616  
FTD-TT-64-999

A New Method of Handling Ingots After Casting, by M. Urbanec.  
CZECH, per, Hutník (Prague), Vol 13, No 12, 1963, pp 579-583.  
BISI 3967

Production Data on the Sinter Plants at the Vitkovice Works, by E. Hecko.  
CZECH, per, Hutník (Prague), Vol 14, No 4, 1964, pp 159-163.  
BISI 3929

Electroslag Remelting of Steel and Alloys in USSR, by I. Kasik, Z. Storkan, et al.  
CZECH, per, Hutn. Listy, No 5, 1964, p pp 311-318.  
\*BISI 4199

Electrolytic Uranium Plating, by Karel Splichal.  
CZECH, per, Jaderna Energia, Vol X, 1964, pp 287-291.  
\*ABC

Contribution to the Study of Steel Properties at High Deformation Rates, by O. Bruska, M. Matyas, et al.  
CZECH, per, Kovove Materialy, Vol 2, No 3, 1964, pp 309-321.  
BISI 3983

Corrosion of Fe-Zn Systems by F. Franz, L. Sandera.  
CZECH, PER, Strojirenstvi, Vol 13, No 11, 1963, pp 844-846.  
\*BISI 4061

Scientific  
Materials & Metallurgy (Contd)

The Effect of Molybdenum on the Heat-Resistance of Ferritic and Pearlitic  $\text{SrNOV}$  Steels, by I. V. Foldyna, et al.  
CZECH, per, Vlastnosti Zarupevnych o Oceli Vyrabenyh Ve Vzkg Ceskoslovenska Vedecko-Technicka Spolesnost Vzkg-Ostrava.

\*BISI 4056

Properties of Alloys for Steam and Gas Turbines Desirable From the Point of View of Development of New Designs, by O. Karkovsky.  
CZECH, per, Zvarcaky Sbornik, Vol X, No 4, 1961, pp 343-352.  
BISI 3878

The Development of Analogue Methods for the Analysis of Transient Heatflow Problems, by A. L. Rovy.  
DUTCH, per, Electro-Techniek, Vol XLI, 17 Oct 1963, pp 502-508.  
BISI 3934

The Influence of Production Factors on the Notch Toughness of Steel Plates, by J. H. van der Veen.  
DUTCH, per, Lastechniek, Vol 29, May 1963, pp 94-99.  
BISI 3958

Beryllium and Zirconium, by M. Salesse, 14 pp.  
FRENCH, rpt, Industries Atomiques, No 1, 2, 1959. 9228779  
AEC-Tr-6552

Sub-Critical Installations for Continuous Evaporations of Up to 200 Litres/Hour-Description and Experimental Results, by Pierre Auchapt, Georges Bouzou, et al.  
FRENCH, rpt, Installations Sous-Critiques D'Evaporation Continue Jusqu' A 200 Litres/Heure-Description et Resultats Experimentaux.  
\*AEC

The Production Control Laboratories of the Plutonium Extraction Plant at Marcoule: Six Years Operating Experience: 1957-1963, by Andre Fontaine.  
FRENCH, rpt, Les Laboratoires de Fabrication de L'Usine D'Extraction du Plutonium de Marcoule: Experience des 6 Premieres annees de Fonctionnement: 1957-1963.  
\*AEC

Study of Basic Phosphate Slag Foams, by P. Kozakévitch, G. Urbain, et al.  
FRENCH, rpt, Paper Presented at the International Congress on Oxygen Steelmaking at Le Touquet, 23-26 Sep 1963.  
BISI 3740

Recrystallization Due to Plastic Deformation in Hot Working, by C. Rossard, 25 pp.  
FRENCH, rpt, Seventh Metallurgy Colloquium, 9228772  
AEC-ORNL-Tr-261

Scientific  
Materials & Metallurgy (Contd)

Effect of Molybdenum on Corrosion-Resistance of 18/10 Stainless Steels in Nitric Environments, by J. Bourrat; J. Hochmann.  
FRENCH, per, Bulletin du Cercle d'Etudes des Metaux, Vol 9, No 8, Dec 1964, pp 285-303.  
BISI 4129

Experience With the Use of Refractories in the OLP Converters at Denain (Usiner), by J. Francois.  
FRENCH, per, Centre Doc Sider Circ, No 2, 1964, pp 501-503.  
BISI 3896

Life of L. D. Vessel Linings at Pompey, by G. Messin.  
FRENCH, per, Centre Doc. Sider. Circ., No 2, 1964, pp 505-515.  
BISI 3897

Study of the Blast Furnace - VIII, by J. Michard.  
FRENCH, per, Centre d'Etude Superieures de la Siderurgie, 1959, pp 80-89.  
BISI 3280 - Pt 8

Investigations into High-strength Weldable Structure Steels, by M. Economopoulos; T. Greday.  
FRENCH, per, C.N.R.M., No 1, Oct 1964, pp 45-63.  
BISI 4001

Single Stage LD-AC Blowing Practice, by P. Nilles, F. Muller, et al.  
FRENCH, per, Centre National de Recherches Metallurgiques, No 1, Oct 1964, pp 15-22.  
BISI 4002

The Application of Temporary Methods for Studying Corrosion Phenomena, by M. L. Brabers, et al.  
FRENCH, per, Corrosion Science, 2, Jan-Mar., 1962, pp 59-69.  
\*BISI 4187

The Use of Electro-Chemical Machining for the Production of Die Impressions and the Machining of Drop-forgings, by J. Joucher.  
FRENCH, per, Estampage et Forge, Vol 2, Mar 1964, pp. 31-36.  
BISI 3995

Atmospheric Pollution by Waste Gas From Cupola Furnaces Gas Cleaning, by P. Nicolas, M. Martin.  
FRENCH, per, Fonderie, Vol 204, Feb 1963, pp 54-62.  
BISI 4162

Scientific  
Materials & Metallurgy (Contd)

Effect of Thermal Cycling on the Transformation Temperature of Plutonium, by B. Spriet.  
FRENCH, per, Journal of Nuclear Materials, Vol XIII, No 1, 1964, pp 13-22.

\*AEC

Anomalies in the Resistivities of Certain Magnetic Metals, by P.G. de Gennes, J. Friedel.  
FRENCH, per, J. Phys. Chem. Solids, Vol 4, 1958, pp 71-77.  
BISI 4009

Study of the Phase Diagram of the Ternary System:  $\text{CaO-CaF}_2\text{-2CaO.SiO}_2$ , by J. Mukerji.  
FRENCH, per, Mem Sci Rev Met, Vol LX, 1963, pp 785-796.  
BISI 3753

Blast Furnaces: Dunkirk Iron and Steel Plant.  
FRENCH, per, Metallurgie et la Construction Mechanique, Vol 95, May 1963, pp 443-450.  
BISI 3827

Research on High-Speed Steels, by T. Malkiewicz.  
FRENCH, per, Met Rev Assoc. Ing Faculte Polytech Mons, Vol 3, No 1, 1962, pp 1-13.  
\*BISI 4237

On the Continuous Casting of Steel, by H. Malcor.  
FRENCH, per, Paper Presented at the IV General Assembly of I. L. A. F. A., Mexico City, No 5, Jul 1964, pp 19-24.  
BISI 3978

Some Properties of Ferrous Oxide, by G. Vagnard, J. Manenc.  
FRENCH, per, Rev. Met. Mem. Sci. Vol 60, Sep 1963, pp 625-636.  
\*BISI 4246

Contribution to the Study of the Effect of Alloying Elements on the Hardenability of Some Carbon Steels, by P. Ravizza.  
FRENCH, per, Rev. Met., Vol 61, May 1964, pp 493-503.  
BISI 4017

Remelting of Consumable Electrodes by the Electro-Slag Process, by B. E. Paton, et al.  
FRENCH, per, Rev. Met., Vol 62, Feb 1965, pp 87-113.  
\*BISI 4230

Scientific  
Materials & Metallurgy (Contd)

Plastic Deformation in Iron and Mild Steels, by C. Boulanger.  
FRENCH, per, Rev Met, Vol XLVII, Jul 1950, pp 547-557.  
BISI 3914

Contribution to the Study of the Scatter of Jominy Test Results, by A. Clerc.  
FRENCH, per, Revue de Metallurgie, Vol 61, 1964, pp 53-63.  
BISI 3852

Structure and Special Features of Sets of Pumps Suitable for the Problems Raised by Vacuum Metallurgy, by G. Fischer and A. Baer.  
FRENCH, per, Revue de Metallurgie, Vol 61, Jan 64, pp 71-85.  
BISI 3850

Graphical Analysis of the Minimum Specific Consumption of the Blast Furnace at Low Blast Temperatures, by A. Rist; N. Meysson.  
FRENCH, per, Revue de Metallurgie, Vol 61, Feb 1964, pp 121-145.  
BISI 3809

Automation in the Fields of Sintering and the Blast Furnace, by P. Dancoisen.  
FRENCH, per, Rev Met, Vol LXI, Mar 1964, pp 233-255.  
BISI 3858

Casting of Semi-Killed Steel, by M. Mulsant.  
FRENCH, per, Revue de Metallurgie, Vol 61, Jul-Aug 1964, pp 653-659.  
BISI 3919

Sampling in Rods by Suction of Liquid Metal, by G. Cavalier.  
FRENCH, per, Rev. Met. Mem. Sci., Vol 61, Mar., 1964, pp 221-228.  
\*BISI 4073

X-Ray Fluorescence Analysis From a Radio-Active Source II-Measurement of the Intensities of the Characteristic X-Rays From Light Elements in Iron ore, by G. Seibel, J. Y. Le Traon.  
FRENCH, per, Rev. Met. Vol 61, Apr., 1964, pp 342-353.  
\*BISI 4054

Deformation Tests on Metastable Austenites Carried Out on Tool Steels, by P. Ravizza.  
FRENCH, per, Rev. Met., Vol 61, June, 1964, pp 577-585.  
\*BISI 4070



Scientific  
Materials & Metallurgy (Contd)

Study of Ageing of Low Carbon Steels Between 20 and 100° C, After Quenching and After Cold Working (with discussion), by J. de Fouguet, et al. FRENCH, Rev. Met. Mem. Sci., 1964, Vol 61, Jul-Aug 1964, pp 525-542.  
\*BISI 3991

Study of the Flow of Metal, by J. Duflot, J. Verge. FRENCH, per, Rev. Met., Vol 61, Nos 7-8, 1964, pp 639-646.  
\*BISI 4068

18/8 Stainless Steel in railway Rolling Stock, by P. Foret FRENCH, per, Rev. Nickel, Vol 30, No 3, 1964, pp. 53-67.  
BISI 4020

Modern Methods of Electron Metallography, by R. Castaing. FRENCH, per, Rev. Univ. Min., Vol 12, Oct 1956, pp 454-465.  
BISI 4052

Lime Crushing Plant for O.L.P. Converter, by F. Benter. FRENCH, per Technique Moderne, Vol 55, 1963, pp 67-69.  
BISI 3960

Lime Crushing Plant for OLP Converter, by F. Benter. FRENCH, per, Tech Mod., Vol LV, 1963, pp 118-119.  
BISI 3960

Sub-Committee of the "Iron Production" Section of the Steel Technology Joint Research Society., by Anon. FRENCH, per, Tetsu to Hagane, Vol 49, No 9, 1963, pp 1163-1175  
\*BISI 4045

Comparative Roentgenographic and Electron Microscopic Studies of the Size of Gunier-Preston Zones in Aluminum-Silver, by R. Baur, V. Gerold. GERMAN, per, Acta Metallurgica, Vol XII, 1964, pp 1449-1453.  
\*AEC

The Excess Temperatures Occuring in the Scaling of Pure Oxygen and Their Theoretical Treaties, by N. G. Schmahl, H. Baumann, et al. GERMAN, per, Arch Eisenh., Vol 29, Feb. 1958, pp 41-46.  
\*BISI 4239

Scientific  
Materials & Metallurgy (Contd)

Cementite Formation in Steels With Low Carbon Content, by H. Borchers, W. Konig. GERMAN, per, Archiv fur das Eisenhüttenwesen, Vol 34, June 1963, pp 453-463.  
BISI 4113

On the Theory of Impact Notch Toughness of Unalloyed Steels, by K. Wellinger, M. Progen. GERMAN, per, Arch. Eisenh., No 35, Mar., 1964, pp 221-240.  
\*BISI 4024

The Dynamics of Forging, by H. Lippmann. GERMAN, per, Arch. Eisenh., June, 1964, pp 507-515.  
\*BISI 4071

The Escape of Gas From Iron Melts, by W. A. Fischer, H. O. Leihener. GERMAN, per, Archiv fur das Eisenhüttenwesen, Vol XXXV, July 1964, 585--601.  
BISI 3905 I & II

Determination of the Gas Content of Ferro-Alloys and Alloying Metals, and Conclusions as Regards Their Usefulness in Service, by O. Etterich, H. Taxhet, et al. GERMAN, per, Archiv fur das Eisenhüttenwesen, Vol 35, Jul 1964, pp 613-617.  
BISI 3870

The Behaviour of High-Speed Steels Under Static Bending and Torsion Stress, by S. Wilmes. GERMAN, per Archiv Fur das Eisenhüttenwesen, Vol 35, Jul 1964, pp 649-657.  
BISI 3911

Predetermination of Coke Consumption in the b.f. on the Basis of a Two Stage Heat, Materials and Reduction Balance III, IV, by E. Schurmann, D. Bulter. GERMAN, per, Arch. Eisenh., Vol 35, Aug., 1964, pp 677-698.  
\*BISI 4030

Bases of Sulphur Reactions, I-Equilibria, II-Kinetics., by H-P. Schulz. GERMAN, per, Arch. Eisenh., Vol 35., 1964, pp 803-819.  
\*BISI 4038

Discussion on the Problem of Sulphur Behaviour in Metallurgical Reactions by Anon. GERMAN, per, Arch. Eisenh., Vol 35, Sept. 1964, pp 821-825.  
\*BISI 4039

Scientific  
Materials & Metallurgy (Contd)

Contribution to the Problem of Oxidation of Iron at High Temperatures, by K. Hedden, G. Lehmann.

GERMAN, per, Arch. Eisenh., Vol 35, Sept. 1964, pp 839-846.

\*BISI 4197

Spectroscopic Analysis of Non-metallic Materials in Works' Laboratories III - Analysis of iron ore sinter and blast furnace slags with a programmed X-ray fluorescence spectrometer, by A. Stetter; H. Kern.

GERMAN, per Archiv fur das Esienhüttenwesen, Vol 35, Sep 1964, pp 867-869.

BISI 4059

Spectroscopic Analysis of Non-metallic Materials in Works' Laboratories IV - Spectroscopic Determination of the Slag Composition During Melting,

by P. Dickens, P. König, et al.

GERMAN, per, Arch. Eisenh., Vol 35, Sep. 1964, pp 871-875.

BISI 4060

Study on the Internal Oxidation of Iron Alloys, by K. Bohnenkamp, H.-J. Engell.

GERMAN, per, Arch. Eisenh., Vol 35, Oct., 1964, pp 1011-1018.

\*BISI 4196

The Yield Point of Ferrite at the Surface of Tensile Test Specimens of Plain Carbon Steel With .03 to 1.15%C, by D. Emter, E. Macherauch.

GERMAN, per, Arch. Eisenh. Vol 35, Sep 1964, pp 909-919.

\*BISI 4240

The Hot-Workability of Steels in the Temperature Range Around 1000°C, by P. Opel, S. Wagner.

GERMAN, per, Arch Eisenh., Vol 35, Dec 1964, pp 1133-1144.

BISI 4132

Dust Removal by Electrical Precipitators, by W. Koglin.

GERMAN, per, Aufbereitungs-Technik, No 11, 1964, pp 580-605.

BISI 4081

Design and Stability of Tubular Structures, by H. Beer.

GERMAN, per, Bänder Bleche Rohre, Aug 1964, pp 432-439.

BISI 4004

Supervision and Control of Acid Pickling Baths and Rinsing Water, (abridged), by V. Neuthen, H. Dembeck.

GERMAN, per, Bänder Bleche Rohre., Oct., 1964, pp 566-576.

\*BISI 4074

Scientific  
Materials & Metallurgy (Contd)

Basic SM-Furnace Roofs, by K. Notzold, O. Porkert.

GERMAN, per, Berg-Hütten. Monatsh., Vol 108, May 63, pp 215-222.

BISI 3899

Walls and Hearth of a Basic SM-Furnace, by K. Leitner.

GERMAN, per, Berg-Hütten. Monatsh., Vol 108, May 63, pp 222-228

BISI 3900

Contribution to the Metallography of Boron-alloyed Special Steels,

by A. Legat; A. Moser; et al.

GERMAN, per, Berg-Hütten. Monatsh., Vol 109, Mar 1964, pp 95-97.

BISI 4035

Investigations on the Effect of Rolling, Heat Treatment and Degree of Purity on the Tendency of Deep-drawing Sheet to Earing, by F. Eisenkolb.

GERMAN, per, Blech, Vol 10, Nov 1963, pp 815-820.

BISI 4109

Swelling Pressure of Coals -III. The Swelling pressure permissible in

coking plants, by M.W.J. Janssen;

J.L.J.G. Meertens, et al.

GERMAN, per, Brennstoff-Chemie, Vol 45, No 9, 1964, pp 275-280.

BISI 4088

Effect of Compositional Variations on Corrosion - Resistance of Stainless Nickel-Chromium and High-Chromium Steels, by I. Class.

GERMAN, per, Chemie-Ing.-Tech., Vol 36, No 2, 1964, pp 131-147.

BISI 3935

Ceramic Lined Scrubbers and Acid Towers, by F. Falcke.

GERMAN, per, Chem Ing Tech, Vol XXXVI, No 4, 1964, pp 325-330.

BISI 3874

Improved Austenitic Stainless Steels for the Chemical Industry, by I. Class, H. Jesper.

GERMAN, per, Chem Ing Tech, Vol XXXVI, 1964, pp 546-552.

BISI 3862

Service Experience With Ring Roll Mills, by G. Westhoff.

GERMAN, per, Energie, Vol 16, Feb 1964, pp 1-8.

BISI 3937

Standardisation and Typification of Cranes, Parts I, II, III, by K. Haas.

GERMAN, per, Fordern Heben, Mar., 1964, Part I, pp 151-154, Part II, pp 404-406,

Part III, pp 630-633.

\*BISI 4189

Scientific  
Materials & Metallurgy (Contd)

Methods of the Appraisal of the Fundamental Properties of Iron Ore and Sinter, by J. Leitner; J. Vinaty. GERMAN, per, Freiberger Forschungshefte, (B62), 1961, pp 1-36.  
BISI 3761

Exergy Balance of Heat Processes in the Iron and Steel Industry, by J. Szargut. GERMAN, per, Freiberger Forschungsh., (B68), 1962, pp 81-103.  
BISI 3716

A New Method for the Graphic Determination of Quantity Ratios in the Continuous Regeneration of Sulphuric Acid Pickling Baths, by L. Fekete. GERMAN, per, Freiberger Forschungsh. Net., Vol 96, B 96, 1964, pp 43-55.  
BISI 4078

Special Features of the Solidification and Strength Properties of Cast Iron, by W. Hiller. GERMAN, per, Giesserei, Vol 51, 5 Mar 1964, pp 113-117.  
BISI 4079

Austenitic Cast Irons, by O. Nickel. GERMAN, per, Giesserei, Vol 51, Sept 3, 1964, pp 509-518.  
\*BISI 4184

Austenitic Cast Irons for High-and Low-Temperature Service, by E. K. Modl. GERMAN, per, Giesserei, Vol 51, 3 Sept, 1964, pp 518-527.  
\*BISI 4185

The Scabbing Diagram for Green Moulding-Sands, by W. Patterson, D. Boenisch. GERMAN, per Giesserei, Vol 51, 15 Oct, 1964, pp 634-641.  
BISI 4119

Measurement of Compressive Stresses in Heated Mould Sands, by F. Hofmann. GERMAN, per, Giesserei, Vol 51, 24 Dec 1964, pp 819-829.  
BISI 4201

Mechanism of Decarburization and Its Prevention in Annealing Baths, by C. Albrecht. GERMAN, per, Hart Tech Mitt, Vol XV, No 2, 1960, pp 72-77.  
BISI 3849

Temper Embrittlement of Constructional Steels, by V. Kraus. GERMAN, per, Harterei-Tech. Mitt., Vol 19, 1964, pp 1-10.  
\*BISI 4186

Scientific  
Materials & Metallurgy (Contd)

Regulation and Control Problems in the Automation of Rolling Mills and Steel Works, by H. O. Loebner. GERMAN, per, Industrie Anzeiger, Vol 86, No 6 28 Aug 1964, pp 51-53.  
BISI 3913

Methods of Producing Blanks for Cold Forming Operations, by F. Haas. GERMAN, per, Industrie-Anzeiger, Vol 86, 20 Oct 1964, pp 1727-1732.  
BISI 4048

Influence of Structure on the Toughness of Cast High-Speed Tools, by S. Wilmes, E. Weber. GERMAN, per, Industrieblatt, Vol 64, Jan 64, pp 8-12  
\*BISI 3912

Measuring Strain-Hardening and Anisotropy of Extra-Deepdrawn Sheet, by G. Jegaden and others. GERMAN, per, International Deep Drawing Research Group Conference in London 3-5th June, 1964, (Section II only).  
\*BISI 4188

Advances in the Spectrochemical Analysis of the Non-Metals With Powerful Low Voltage Sparks, by K. Pfeilsticker. GERMAN, per, Microchimica Acta, 1955, p 358.  
AEC-18-Tr-15

Methods and Results of Rapid Heating of Maerz Type Open Hearth Furnaces, by F. Rabes. GERMAN, per, Neue Hütte, Vol 4, Nov 1959, pp 663-668.  
BISI 3957

Examination of the Effect of Chemical Composition and Degree of Deformation on the Mechanical Properties of St.58b-2, by R. Muller. GERMAN, per, Neue Hütte, Vol 8, Nov 1963, pp 660-662.  
BISI 4157

The Standard Deviations of Methods for the Analysis of Steel, by K. Doerffel, M. Schulze. GERMAN, per, Neue Hütte, No 9, Nov 1964, pp 690-694.  
BISI 4106

The Use of Electron-Microscopic Local Bending in Determining the Rolled Texture of Copper, by F. Haessner, U. Jakubowski, et al. GERMAN, per, Physica Status Solidi, No 7, 1964, pp 701-710.  
\*AEC

Scientific  
Materials & Metallurgy (Contd)

Electron Microscopical Investigations on the Topology of AlNi In Plain Carbon Steels, by A. Kubik, A. Legat, et al.  
GERMAN, per, Radex Rund., No 6, 1961, pp 739-746.  
\*BISI 4235

Problems of the Irradiation Effect in Metals, by E. Schmid, K. Lintner, 32 pp.  
GERMAN, per, Radex Rundschau, No 4, 1963, pp 519-534. 9228396  
AEC-ANL-Tr-150

Comparison of Various Chill Sampling Methods for Determining the Hydrogen Content of Liquid Steel, by W. Schwarz; H. Zitter.  
GERMAN, per, Radex Rund., No 4, Sep 1964, pp 226-232.  
BISI 4058

Contribution to the Deoxidation of Chrome-Nickel Sintering Steels, by A. Schoberl, W. Holzgruber, et al.  
GERMAN, per, Radex Rund., No 5, Nov, 1964, pp 251-265.  
\*BISI 4200

Discussion of the Question: How Can the Quality of Butt Welds be Improved, Without Back-Chipping and Backing Runs? by S. Stolp.  
GERMAN, per, Schweissen und Schneiden, Vol 16, Nos 5 & 7, 1964, pp 69-76 & 104-105.  
BISI 3926

Problems Encountered in Submerged Arc Welding, by E. Kauhausen, P. Muller.  
GERMAN, per, Schweisstechnik, Vol 23, 1962, pp 39-44.  
BISI 4153

The Properties of Porous Sintered-Glass, by Herbert Schoenborn, 17 pp.  
GERMAN, per, Silikattechnik, Vol XIII, No 12, 1962, pp 419-424. 9696621  
FTD-TT-64-992

Observations on Intercrystalline Stress-Corrosion of Soft Plain Carbon Steels, by W. Radeker, H. Grafen.  
GERMAN, per, Stahl Eisen, Vol 76, Nov. 29, 1956, pp 1616-1628.  
\*BISI 4065

The Reducibility of Lumpy Ore, by O. Oelsen.  
GERMAN, per, Stahl und Eisen, Vol 81, 25 May 1961, pp 737-738.  
BISI 4087

Scientific  
Materials & Metallurgy (Contd)

Heat Treatment of 16 MnCr 5 Case-Hardened Steel for Achieving the Best Workable Grain Structure, by W. Knorr, E. Habicht, et al.  
GERMAN, per, Stahl und Eisen, Vol 83, 7 Nov 1963, pp 1477-1484.  
BISI 3923

Power and Work Requirements of a Continuous Light Section Mill, by W. Schwenzfeier, O. Pawelski.  
GERMAN, per, Stahl und Eisen, Vol 83, 21 Nov 1963, pp 1555-1561.  
BISI 3533

Technical Measuring Research on Rolling Mill Drives, by W. Koller.  
GERMAN, per, Stahl und Eisen, Vol 84, 2 Jan 1964, pp 15-24.  
BISI 3585

Automation of Blastfurnace Charging and Burden Distribution, by M. Lowenstein.  
GERMAN, per, Stahl und Eisen, Vol 84, 2 Jan 1964, pp 36-38.  
BISI 3586

The Production of Heavy Plate and Wide Strip and the Preparation for This Operation, by A. Lovay, H. Kreulitsch.  
GERMAN, per, Stahl und Eisen, Vol 84, 27 Feb 1964, pp 237-244.  
BISI 3853

Mathematical Expression of Tension-Stress-Strain Curve for Cylindrical Tensile Specimens With Internal Stresses of the 1st Order, by A. Peiter.  
GERMAN, per, Stahl Eisen, Vol 84, Mar. 26, 1964, pp 434-436.  
\*BISI 4047

Using Analogue Computers to Optimize Work Processes, by J. Heiderpriem.  
GERMAN, per, Stahl und Eisen, Vol 84, 23 Apr 1964, pp 552-556.  
BISI 3869

Investigations on Used Hot Blast Stove Bricks, by K. Konoricky, G. Routschka.  
GERMAN, per, Stahl Eisen, Vol 84, May 7, 1964, pp 618-624.  
\*BISI 4023

Comparison of Various Instruments for Measuring Surface Roughness, by U. Krause; O. Pawelski.  
GERMAN, per, Stahl und Eisen, Vol 84, 2 Jul 1964, pp 859-868.  
BISI 3819

Integrated Production Planning for a Heavy and Medium Plate Mill with an Electronic Computer, R. Nells.  
GERMAN, per, Stahl und Eisen, Vol 84, July 30, 1964, pp 1006-1013.  
BISI 3928

Scientific  
Materials & Metallurgy (Contd)

Performance Tests on a Blast Furnace With a Burden Consisting of Sinter and Lump Ores, by H.T.Brandt; G. Heynert. GERMAN, per, Stahl und Eisen, Vol 84, 10 Sep 1964, pp 1169-1174. BISI 4082

Melting Low-Alloy Steel in the Arc Furnace without a Refining Period, by F. Harms; G. Zingel. GERMAN, per, Stahl und Eisen, Vol 84, 10 Sep 1964, pp 1187-1197. BISI 3977

Control of the Wear of Blast Furnace Brickwork by means of Radioactive Isotopes. Results and Experience, by G. Sommerkorn. GERMAN, per, Stahl und Eisen, Vol 84, 10 Sep 1964, pp 1197-1202. BISI 4084

A new Device For Measuring the Coefficient of Friction in Plastic Deformation, by O. Pawelski. GERMAN, per, Stahl und Eisen, Vol 84, 24 Sep 1964, pp 1233-1243. BISI 4095

Wear in Tubes During the Conveying of Granular Materials, by E.H.K. Muller, K. Polthier. GERMAN, per, Stahl und Eisen, Vol 84, 8 Oct 1964, pp 1322-1328. BISI 3992

Contributions to Steelworks Chemistry, by E. Schoeffmann. GERMAN, per, Stahl und Eisen, Vol 84, Oct 1964, pp 1344. BISI 4133

The Planning of a Dressing Shop for Semi-finished Materials to Supply Light Section and Medium Section Mills (with Discussion), by F. Grottemeyer. GERMAN, per, Stahl und Eisen, Vol 84, 22 Oct 1964, pp 1410-1424. BISI 4016

On the Sintering Behaviour of Iron Ores With Various Degrees of Reduction, by L. von Bogdandy, N.-P. Schulz, et al. GERMAN, per, Stahl Eisen, Vol 84, 19 Nov. 1964, pp 1561-1568. \*BISI 4236

Reducing the Volume of Rinsing Water When Pickling Wire in Hydrochloric Acid Solution, by L. Delille. GERMAN, per, Stahl Eisen, Vol 84, Dec 31, 1964, pp 1853-1858. \*BISI 4191

Scientific  
Materials & Metallurgy (Contd)

Rickling Wire With Sodium Hydride, by J. Delille. GERMAN, per, Stahl Eisen, Dec. 31, 1964, pp 1865-1872. \*BISI 4192

Formulae for a Mathematical Model of the Sintering Process, by H. Kronmuller, F. Cappel. GERMAN, per, Stahl Eisen, Vol 85, 25 Mar 1965, pp 297-307. \*BISI 4243

Investigation of the Dust Extraction of Brown Converter Smoke by a New Electrostatic Method, by R. Flossmann, A. Schutz. GERMAN, per, Staub, Vol 23, 1963, pp 443-451 BISI 3810

The Latest Development of the Konitest Dust Measuring Installation Operating on an Electrostatic Friction Basis, R. Prochaska. GERMAN, per, Staub, Vol XXIV, Sept 64, pp 353--359. BISI 3993

Metallurgy of Free-Cutting Steel. GERMAN, per, Technica, Vol 10, Jun 1961, pp 865-866. BISI 4093

Organizational Principles for Standard Cost Calculation, by H. Messmann. GERMAN, per, Tech. Mitt., Vol 49, 1956, pp 1-12. \*BISI 4055

Model Tests on the Behaviour of a Free Oxygen Jet in a Foamy Slag, by K. H. Kluth, J. Maatsch. GERMAN, per, Techn. Mitt. Krupp, Vol 3, Dec 1964, pp 93-100. \*BISI 4242

On the Ingress of Air in Oxygen Top-Blowing Processes, by K. H. Kluth, J. Maatsch. GERMAN, per, Techn. Mitt. Krupp. Forsch. 22, No 1, 1964, pp 24-40. \*BISI 4267

Experiments With Oils and Oil Emulsions in Cold Rolling, by E. Tsuji, W. Lueg, et al. GERMAN, per, Trans. Nat. Res. Inst. Met., Vol 4, No 3, 1962, pp 135-142. BISI 3975

Scientific  
Materials & Metallurgy (Contd)

Examination of Austenitic Superheater Tubes After Several Years' Service, by W. Hinrich, et al.  
GERMAN, per, VGB Mitt., No 93, Dec., 1964, pp 394-400.  
\*BISI 4198

Lubricant Effects in Drop Forging Dies, by H. Tolkien.  
GERMAN, per, Werkstattstechnik, Vol 51, Feb 1961, pp 102-105.  
BISI 3981

Statistical Quality Control in Screw Production, by R. Kellermann, W. Schuster.  
GERMAN, per, Werkstattstechnik, June, 1964, pp 264-270.  
\*BISI 4051

The Dependence of the Intercrystalline Corrosion of a Non-stabilized 18/10 Chromium-nickel Steel on Several Test Solutions and on the Potential in Boiling 2N H<sub>2</sub>SO<sub>4</sub>, by H. Schwenk, H.-J. Schüller, et al.  
GERMAN, per, Werkstoffe Korrosion, Vol 15, Aug 1964, pp 621-631.  
BISI 4096

Theoretical Significance of Iron (II) - Sulphate Pockets in Atmospheric Corrosion, by H. Schwarz.  
GERMAN, per, Werkstoffe Korrosion, Mar, 1965, pp 208-212.  
\*BISI 4234

Investigations to Poison Metal Catalysts. II. Poisoning Nickel Catalysts With Oxygen, by H. Kinza, W. Fiebig, 21 pp.  
GERMAN, per, Zeit für Anorganische und Allgemeine Chemie, Vol CCCXXIX, 1964, pp 146-162. 9696612  
FTD-TT-65-160

Anodic Dissolutions of Iron, by K. F. Bonhoeffer, K. E. Heusler.  
GERMAN, Zeitschrift für Elektrochemie, Vol 61, No 1, 1957, pp 122-123.  
BISI 4036

The Separation of Arsenic During Magnetic Roasting of Pyrite Flotation Concentrates Containing Arsenic, by K.-G. Gorling, H. Apler.  
GERMAN, per, Z. für Erzb. u Met. Vol 12, Nov 1959, pp 553-557.  
\*BISI 4245

Preparation of Fe-Zn Alloys From Amalgams (slightly abridged), by F. Lihl; A. Demel.  
GERMAN, per, Zeitschrift für Metallkunde, Vol 43, No 9, 1952, pp 307-310.  
BISI 4111

Scientific  
Materials & Metallurgy (Contd)

The Hardening of Aluminum-Silver Alloys. IX. Roentgenographic Studies on Cold Hardening, by Volkmar Gerold.  
GERMAN, per, Z für Metallkunde, Vol XLVI, No 9, 1955, pp 623-631.  
\*AEC

Mixing Processes in the Aluminum-Silver System, by Reinhold Baur, V. Gerold.  
GERMAN, per, Z für Metallkunde, Vol LII, No 11, 1961, pp 671-676.  
\*AEC

Thermal Stress in the Cold-Hardened Stage of Aluminum-Zinc Alloys, by Volkmar Gerold.  
GERMAN, per, Z für Metallkunde, Vol LIV, No 5, 1963, pp 257-262.  
\*AEC

The Beginning of Segregation From Super-Saturated Crystals, by Erhard Hornbogen.  
GERMAN, per, Z für Metallkunde, Vol LVI, No 3, 1965, pp 133-154.  
\*AEC

Concerning Thin Hydrocarbon Layers Formed by Electron or Ion Bombardment, by H. König, G. Helwig.  
GERMAN, per, Z. für Physik, Vol 129, 1951, pp 491-503.  
\*BISI 4161

Physico-Chemical Principles as the Basis of a General Arthrology, by Paul Otte,  
GERMAN, per, Z Orthop., Vol 95, No 2, 1961, pp 202-212.  
NII 3-17-65

Study of the Catalase Activity of the Blood of Various Mouse Strains, by E. Magdon.  
GERMAN, per, Z. Versuchstierk., Vol 1, 1962, pp 173-178.  
NII 3-33-65

Internal and External Ionization of Insulating Materials, by L. M. Bar.  
HUNGARIAN, per, Elektrotechnika, Vol LVII, No 4, 5, 1964, pp 129-137.  
\*AEC

New Method for the Economical Grooving of Light Angle Sections, by I. Pokos.  
HUNGARIAN, per, Kohászati Lapok, Vol 97, Nov 1964, pp 519-525.  
BISI 4066

Materials for Railway Construction, by U. Borriano.  
ITALIAN, per, A.I.M. Giornate di Studio sui Metalli (Turin), Vol 20, Mar 1964, pp 109-164.  
BISI 4183

Scientific  
Materials & Metallurgy (Contd)

Deep-Drawing Test For Light Alloy  
Rolled Products, by C. Panseri et al.  
ITALIAN, per, Aluminio, No 4, 1964,  
pp 173-184.  
\*BISI 4031

Roofs for Electric Furnaces, by L. Parodi.  
ITALIAN, per, Fonderie, Vol 13, Mar 64,  
pp 137-140.  
BISI 3955

Thermomagnetic Treatments of Steels for  
Non-Oriented Grain Transformers, by  
A. Alderisio, F. Gauzzi, et al.  
ITALIAN, per, Met Ital, Vol LV, Sep 1963,  
pp 449-455.  
BISI 3915

The Weldability of Beams Made of Semi-  
Killed Steel, by S. Di Bartolo;  
I. Corsaro.  
ITALIAN, per, Riv. Ital. Saldatura, Vol 16,  
Mar/Apr 1964, pp 63-73.  
BISI 4149

Collective Secondary Recrystallization  
Structure of Fe-Si-Al Cold-rolled  
Sheet, by I. Gokyu, et al.  
JAPANESE, per, J. Japan Inst. Metals,  
Vol 25, No 11, 1961, pp 712-716.  
BISI 4115

Determination of Zinc in Steel and  
Cast Iron, by T. Okubo, F. Uehara.  
JAPANESE, per, Japan Analyst, Vol 11,  
No 7, 1962, pp 761-762.  
\*BISI 4241

Studies on Workability, Heat Treatment Characteristics  
and Corrosion Resistance for Pressurised Water of  
Zr-1% Mo-1% Cr and Zr-1% Mo-1% Ni Alloys, by  
Shigeo Aoki, 15 pp.  
JAPANESE, per, Journal of the Japan Institute of  
Metals, Vol XXVIII, No 1, Feb 1964, pp 22-27.  
9228389  
AEC-NMJ-Tr-24

Effects of Vacuum Sintering Atmosphere on the  
Properties of Sintered UO<sub>2</sub> Pellets, by  
Tadashi Ogura, Isuo Kawasaki, et al, 25 pp.  
JAPANESE, per, Journal of the Japan Society of  
Powder Metallurgy, Vol X, No 6, 1963, pp 248-256.  
9228385  
AEC-NMJ-Tr-23

Oxygen Converter Steelmaking Controlled  
by the Computer, by K. Itaka, M. Ito,  
et al.  
JAPANESE, per, Kinzoku, Vol 33, 15 Jun.  
1963, pp 36-45.  
BISI 3866

Mass Spectrometric Study of Rare Gases in  
Radioactive Minerals, by Hitoshi Sakai, 43 pp.  
JAPANESE, per, Mass Spectroscopy, Vol X,  
No 21, Oct 1962, pp 35-71. 9228387  
AEC-NMJ-Tr-18

Scientific  
Materials & Metallurgy (Contd)

Effect of Minor Elements on Secondary  
Re-Crystallization in Singly-Oriented  
Silicon Steel, by T. Saito.  
JAPANESE, per, Nippon Kinzoku, Vol 27,  
No 4, 1963, pp 191-195.  
BISI 4108

Study of the Plastic Deformation of  
Single Crystals in Extra Mild Steel,  
by S. Nagashima, S. Sekino, et al.  
JAPANESE, per, Nippon Kinzoku Gakkaishi,  
Vol 27, No 10, 1963, pp 481-485.  
\*BISI 4041

Large Sized Capped Ingot for Thin  
Rolled Steel Sheets, by M. Nakamura,  
et al.  
JAPANESE, per, Nippon Kokan Tech. Rep.  
No 28, Dec 1963, pp 425-432.  
\*BISI 4040

Progress of Pig Iron Technology in Japan,  
by Anon.  
JAPANESE, per, Tetsu to Hagane, Vol 49,  
No 9, 1963, pp 1145-1233.  
\*BISI 4025

Fundamental Study of Fuel Injection.  
JAPANESE, per, Tetsu-to-Hagane, Vol 50,  
Pt. 28, 1964, pp 364-366.  
BISI 4177

Heavy-oil Injection with Coke Oven  
Gas at Higashida No. 5 Blast Furnace,  
by K. Mitsui, et al.  
JAPANESE, per, Tetsu-to-Hagane, Vol 50,  
Mar 1964, pp 366-369.  
BISI 4178

Tar Injection into Blast Furnaces,  
by T. Kobayashi; T. Izawa, et al.  
JAPANESE, per, Tetsu-to-Hagane, Vol 50,  
Mar 1964, pp 369-371.  
BISI 4179

The Behaviour of Sulphur During Heavy  
Oil Injection, by T. Doinouchi, et al.  
JAPANESE, per, Tetsu-to-Hagane, Vol 50,  
Mar 1964, pp 371-373.  
BISI 4180

Studies for Improvements in Blast  
Furnace Practice, by T. Kanokogi,  
et al.  
JAPANESE, per, Tetsu-to-Hagane, Vol 50,  
Mar 1964, pp 373-376.  
BISI 4181

Electrolytic Production of Uranium and Thorium From  
Fused Salts, by W. Rafalaki, 43 pp.  
POLISH, rpt, Paper Presented at the Second Yugoslav-  
Polish Symposium on Uranium Technology and Metal-  
lurgy, Zakopane, 3-9 Sep 1963. 9228798  
AEC-NP-Tr-1221

Scientific  
Materials & Metallurgy (Contd)

Oxidation Mechanisms of Metals at High Temperatures (Part II), by S. Mrowec.  
POLISH, per, Archiwum Hutnictwa (Warsaw), No 3, 1962, pp 251-264.  
BISI 3790

How to Make Spectrographic Standards On Steel, by S. Gregorczyk.  
POLISH, per, Chemia Analityczna, Vol 7, No 2, 1962, pp 333-341.  
BISI 3822

Progress in Technology of Hot Extrusion of Steel, by W. Dobrucki.  
POLISH, per, Hutnik (Poland), Vol 30, No 11, 1963, pp 359-367.  
\*BISI 4069

Experience from the Experimental Production of Pine Groundwood for Newsprint, by Stanislaw Grell.  
POLISH, per, Prace Instytutu Celulozowo-Papierniczego, Vol 4, No 2, 1955, pp 1-10. Communiqué No 75.  
CFSTI 61-11381

Investigation of the Production of Deep-Drawing Steel De-Oxidised With Aluminium During Casting, by A. Kolano, et al.  
POLISH, per, Prace Rady Naukowo-Techn. Huty im Lenina, No 13, 1963, pp 19-50.  
BISI 4154

Basic Ideas in the Design of Modern Blast Furnace, by C.H.L. Schneider.  
PORTUGUESE, per, Eng. Min. e Met., Vol 38, July, pp 13-18-I, Aug., pp 85-89-II, 1963.  
\*BISI 4193

Dearsenication of the Pyrite Concentrates in a Multi-Stage Furnace, by Badoiu et al.  
ROUMANIAN, per, Rev. C in. Bucharest, Vol 14, No 6, 1963, pp 324-327.  
\*BISI 4202

Effect of the Return on the Mechanical Resistance of Sinter, by A. A. Alvarez.  
SPANISH, per, Centro Nac. Investig. Met., Vol 17, No 92, 1964, pp 259-370.  
\*BISI 4244

The Present Situation Regarding the Roasting of Sulphide Ores in Spain, by E. Curras; A. M. Morales.  
SPANISH, per, Ion, Vol 24, No 227, Aug 1964, pp 441-447 & 456.  
BISI 4125

Scientific  
Materials & Metallurgy (Contd)

Mexican Iron Ores and Their Use in the Steel Industry, by F. G. Vargas.  
SPANISH, per, Paper Presented at the IV General Assembly of I.L.A.F., Mexico City, No 21, 19-24 Jul 1964.  
BISI 3979

Tensile Strength at Elevated Temperatures by G. Wallquist.  
SWEDISH, per, Lernkont. Ann., Vol 146, No 2, 1962, pp 53-80.  
\*BISI 4028

Mathematics & Data Processing

Complemented Modular Lattices and Regular Rings; by L. A. Skornyakov.  
RUSSIAN, bk.  
Oliver and Boyd.

Integration of Equations of Parabolic Type by the Method of Nets; by V. K. Saul'yev.  
RUSSIAN, bk.  
Pergamon Press.

Probabilistic Methods in the Theory of Numbers; by J. Kubilius.  
RUSSIAN, bk.  
Amer Math Soc

Problems in Designing Pneumatic Computers, by Yu. I. Illichev.  
RUSSIAN, rpt.  
\*FTD-MT-65-174

Theory of Difference Schemes: by S. L. Godunov, V. S. Ryabenki.  
RUSSIAN.  
North-Holland Publishing Company

Cybernetics in the Service of Communism, Volume II Queuing and Reliability Theory, by A. I. Berg, N. G. Bruyevich and B. V. Gnedenko, 481 pp.  
RUSSIAN, bk, Kibernetika na Sluzhu Kommunizma, Tom 2, Teoriya Nadezhnosti i Teoriya Massovogo Obsluzhivaniya, 1964, pp. 1-368.  
JPRS 30128



Scientific  
Mathematics & Data Processing (Contd)

Calculation of Charges During Massive Explosions for Throwing-Out, by G. I. Pokrovskiy, A. A. Chernigovskiy, 89 pp.  
RUSSIAN, bk, Raschet Zaryadov pri Massovykh Vzryvakh na Vybros, Moscow, 1962, pp 1-88.  
FTD-MT-64-253

Programming and Solution of Problem on Two-Address Machines, by T. S. Latsheva.  
RUSSIAN, bk, Programmirovaniye i Resheniye Zadach na Dvukhadresnykh Mashinakh, Moscow, 1963, pp 1-182.  
\*FTD-TT-63-402

A New Method for the Mathematical Analysis of Certain Nonlinear Vibrations, by W. Bader.  
RUSSIAN, rpt, Trudy Mezhdunarodnogo Simpoziuma po Nelineynym Kolebaniyam, Kiev, 12-18 Sep 1961, pp 73-85.  
NASA TT F-9269

Application of Variational Principles, the Hamilton Principle in a Particular to the Approximate Solution of Hyperbolic Differential Equations, by V. I. Krylov, N. P. Keda.  
RUSSIAN, per, Dok Ak Nauk BSSR, Vol VIII, No 11, 1964, pp 689-692.  
NASA TT F-9296

A Unified System of Computer Centers, by A. Boyarskiy, and V. Dzhaparidze, 8 pp.  
RUSSIAN, np, Ekonomicheskaya gazeta, No 7, 17 Feb 65, pp 13-14.  
JPRS 29663

The Organization of Communication Between the Traffic Control Point Of the Power System and the Computer Center, by N. G. Zaytsev and V. A. Lebedev, 7 pp.  
RUSSIAN, per, Elektrichestvo, No 10, Oct 64, pp 52-54.  
JPRS 29031

The Machine Translation of Inorganic Compound Formulas Into Systematic Nomenclature, by A. L. Seyfer, A. A. Matveyeva, and M. Ye. Pantyukhina, 6 pp.  
RUSSIAN, per, Nauchno-Tekhnicheskaya Informatsiya, No 1, 1965, pp. 23-25.  
JPRS 29935

Semantics and Machine Translation, by M. V. Arapov and Yu. A. Shreyder, 17 pp.  
RUSSIAN, per, Nauchno Tekhnicheskaya Informatsiya, No 1, 1965, pp 39-49.  
JPRS 29935

Utilisation of Computers Discussed, by L. Pil'movich, 7 pp.  
RUSSIAN, np, Pravda Ukrainy, 21 Jan 1965, p 2.  
JPRS 29633

Scientific  
Mathematics & Data Processing (Contd)

Machine Processing of Oceanographic Characteristics, by V. A. Burkov and Ya. L. Tsipis, 80 pp.  
RUSSIAN, per, Trudy Instituta Okeanologii, Vol LXXV, 1964, pp. 3-61.  
JPRS 30031

Machine Data Processing of Ships' Surface Observations, by A. I. Sachkova, 10 pp.  
RUSSIAN, per, Trudy Instituta Okeanologii, Vol LXXV, 1964, pp. 62-68.  
JPRS 30032

Automatic Input and Oceanographic Data Processing by the "Ural-2" Computer, by R. B. Dubina and Yu. V. Nikolayev, 5 pp.  
RUSSIAN, per, Trudy Instituta Okeanologii, Vol LXXV, 1964, pp. 69-72.  
JPRS 30033

The Specialized Electronic Computer "Ocean," by V. P. Vanin, L. I. Galerkin, and Yu. K. Chervychnik, 44 pp.  
RUSSIAN, per, Trudy Instituta Okeanologii, Vol LXXV, 1964, pp. 99-131.  
JPRS 30034

How to Classify the Technical Means of Programmed Instruction, by I. I. Tikhonov, 7 pp.  
RUSSIAN, per, Vestnik Vysshey Shkoly, No 10, 1964, pp 22-27.  
JPRS 29639

Mathematics. Its Traditions and Possibilities, by P. M. Erdniyev, 6 pp.  
RUSSIAN, per, Vestnik Vysshey Shkoly, No 10, 1964, pp 30-34.  
JPRS 29639

The Concept of the Configuration, by Ye. V. Paducheva, 19 pp.  
RUSSIAN, per, Voprosy yazykoznaniiya, No 1, Jan 65, pp 56-68.  
JPRS 29722

Accuracy of Geodetic Data, by Milos Cimbalnik, 7 pp.  
CZECH, per, Zhurnal Prirodni Prirani Geodetichesk Zvladu, Vol X (52), 1964, pp 285-297.  
ACSI 1-6550  
ID 2204004365

Mac-Rad, A Multi-Group Screening Program for Plane Geometry.  
GERMAN, per, Kernentzelle-Anlagen Bericht, No 116, Oct 1963.  
\*ABC

Scientific  
Mathematics & Data Processing (Contd)

Development of the Production of Data Processing Machines in the German Democratic Republic, by Heinrich Gerschler, 10 pp  
GERMAN, per, Statistische Praxis, 1965, No 2, pp 82-85  
JPRS 29,717

The Algebra of Logic, Logic Circuits, and Their Applications. 3. Semiconductor Decoder Circuit II for Watts Mirror Inverted Decimal Code, by A. Agoston, 14 pp.  
HUNGARIAN, per, Meres es Automatika, Vol II, No 11, 1963, pp 351-354.  
9696608  
FTD-TT-64-1207

Digital Computer.  
FRENCH, Patent No 1,252,835.  
Patent Office

Nuclear Science & Technology

Nuclear Fleet: Purposes and Miscalculations, by S. G. Gorshkov.  
RUSSIAN, rpt.  
\*FTD-MT-65-173

Theory and Methods of Nuclear Reactor Calculations, RUSSIAN, bk.  
Consultants Bureau

Thermonuclear Weapons, by M. B. Neiman, K. M. Sadilenko, 15 pp.  
RUSSIAN, rpt, Chapter III, p 58. 9228777  
AEC-Tr-6533

Physics of Nuclear Fission, by N. A. Perfilov, V. P. Eismont.  
RUSSIAN, bk, Fizika Yadra i Atomnykh Yader, 1964, 210 pp.  
AEC-tr-6205

An Increase of the Internal Beam Current From the JINR Synchrocyclotron by Additional Electrostatic Focusing, by V. I. Danilev, I. B. Enchevich, et al.  
RUSSIAN, rpt, Joint Institute for Nuclear Research, 1964.  
\*AEC-Harwell

Triple Fission of  $U^{235}$  on Resonance Neutrons, by I. Kvitek, Yu. P. Popov, et al.  
RUSSIAN, rpt, Joint Institute for Nuclear Research, Dubna, 1965, 8 pp.  
\*AEC

Scientific  
Nuclear Science & Technology (Contd)

Radiative Widths of Medium Nuclei, by Kim H. San, L. B. Pikelner, et al.  
RUSSIAN, rpt, Joint Institute for Nuclear Research, Dubna, 1965, 7 pp.  
\*AEC

Investigations of Intensities of Hard  $\gamma$  Transitions in the Capture of Resonance Neutrons by  $Ba^{135}$ , by J. Urbanec, J. Vrzala, et al.  
RUSSIAN, rpt, Joint Institute for Nuclear Research, Dubna, 1965, 10 pp.  
\*AEC

Kinetic Energy of Fragments and Energy Balance in Fissioning of  $U^{235}$  by Thermal Neutrons, by V. F. Apalin, Yu. N. Gritsyuk, et al.  
RUSSIAN, rpt, Kineticheskaya Energiya Oskolkov i Energeticheskii Balans pri Delenii  $U^{235}$  Teplovymi Neutronami, 1964, 13 pp.  
\*AEC

The Current Status and Problems of the Calculation of Electron Shells in Molecules, by N. D. Sokolov, 38 pp.  
RUSSIAN, bk, Litovskii Fizicheskii Sbornik, Vol III, No 1/2, 1963, pp 205-226. 9696311  
Amer Meteorol Soc  
T-R-459

Anti-Radiation Measures Handbook, by L. A. Tyunov, G. A. Vasil'yev, et al.  
RUSSIAN, bk, Spravochnik Protivoluchevyye Sredstva, Moscow-Leningrad, 1964, 318 pp.  
\*FTD-MT-65-142

Production of Radioactive  $^7Be$  From and Cyclotron Target, by I. F. Kolosova, I. V. Kolosov, 7 pp.  
RUSSIAN, per, Atom Energ, Vol XV, 1963, pp 422, 423. 9228785  
AEC-ORNL-Tr-527

On the Problem of the Influence of the Structure of Porous Bodies on the Size of the Specific Surface Area Being Determined by the Method of Permeability of Gases, by B. N. Goshchitskiy, I. S. Izraellevich, et al, 8 pp.  
RUSSIAN, per, Dok Ak Nauk SSSR, Vol CLV, 1964, pp 640-643. 9228605  
AEC-SC-T-65-706

On the Development of Radioactive Haloes in Biotite, by Choppe Gunter.  
RUSSIAN, per, Mineralog Sbornik, L'vovsk, Geol Obshch pri L'vovsk, No 16, 1963, pp 328-333.  
\*AEC

Anomalous Plasma Diffusion in Ion Cyclotron Resonance, by V. V. Chechkin, et al.  
RUSSIAN, per, Nuclear Fusion, Vol IV, 1964, pp 145-151.  
\*NASA TT F-9377

The Use of Ethanol in Isolating  $^{22}Na$  From Cyclotron Targets, by A. S. Zhukovskaya.  
RUSSIAN, per, Radiokhimiya, Vol VII, 1965, pp 125.  
\*AEC

Scientific  
Nuclear Science & Technology (Contd)

Perturbation of the Thermal Equilibrium Distribution in Thermal Dissociation of Diatomic Molecules, by E. E. Nikitin, 14 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XXXIII, No 3, 1959, pp 572-580. 9696629  
FTD-TT-64-468

Nuclear Physics Detection Instruments and Their Application, by Wang Chu-Hsiang.  
CHINESE, bk, Ho Wu Li T'an Ts'ie Ch'i Ying Yung, Peking, 1964, pp 1-375.  
\*FTD-TT-65-552

A Simple Calorimetric Method of Measuring X-Ray Doses, by Z. Kovar, 19 pp.  
CZECH, per, Jaderna Energie, No 10, 1963, pp 1-5. 9228786  
AEC-UCRL-Tr-1184-L

New Methods of Avia-Nuclear Attacks, by J. Hanzal, 7 pp.  
CZECH, per, Kridla Vlasti, No 14, 1964, pp 460-462. 9696613  
FTD-TT-64-1017

Experimental Contribution to the Study of Gas Bearings, by Gerald Gobert, 111 pp.  
FRENCH, rpt, 1962. 9228778-V  
AEC-Tr-6532

Use of Particles Other Than Neutrons in Activation Analysis, by Charles Engelmann.  
FRENCH, rpt, Emploi de Particules Autres que les Neutrons en Analyse par Activation.  
\*AEC

Ion Source for an Isotope Separator, by M. J. Samethand.  
FRENCH, rpt, Fuente de Iones para un Separador de Isotopos, 1964.  
\*AEC

Separation of the Isotopes of the Heavy Elements, by Irma Lambert.  
FRENCH, rpt, Separation Isotopique des Elements Lourds.  
\*AEC

Problems of the Liquid Wastes From Nuclear Installations, by E. Cerrai, 8 pp.  
FRENCH, per, Energia Nucleare, Vol VII, No 9, 1962, pp 581-589. 9228832  
AEC-DEG-INF-SER-281

Radiation Shielding on the Kama Suspension Test Reactor, by Hub Wilber.  
GERMAN, rpt, Bescherming Tegen Straling Afkomstig van de DEMO Suspensie Test Reactor.  
\*AEC

The Storage of Radioactive Waste in the Julich Nuclear Research Center, by K. M. Ransay, R. Schulze-Rettmer.  
GERMAN, per, Atomwirtschaft, Vol IX, No 12, 1964, pp 617-619.  
\*AEC

Scientific  
Nuclear Science & Technology (Contd)

Bromine Determination in Zinc Sulfate Through Activation Analysis, by H. Koch, K. D. Grossmann, 9 pp.  
GERMAN, per, Kernenergie, Vol VI, 1963, pp 651-653. 9228593  
AEC-ORNL-Tr-455

On the Mechanism of X-Ray Discoloration of Ionic Crystals, by M. Balarin, 31 pp.  
GERMAN, per, Kernenergie, Vol VII, No 6, 7, 1964, pp 434-443. 9228781  
AEC-NP-Tr-1213

Tables for Neutron Activation, by Franz Baumgartner.  
GERMAN, per, Kerntechnik, Vol III, 1961, pp 356-369.  
\*AEC

The Resonance on a Direct Process  
by C. Riedel.  
GERMAN, per, Nuclear Physics, Vol IX, No 4, 1964, pp 282-285.  
\*AEC

The Distribution of Radioactive Substances in the Free Atmosphere, by Josef Friebsch, 14 pp.  
GERMAN, per, Physikalische Z., Vol XXXII, No 16, 1931, pp 622-629. 9696507  
Amer Meteorol Soc  
T-G-45

Production of Carrier-Free <sup>54</sup>Mn by Reactor Irradiation of Iron, by G. B. Fasolo, R. Malvano, et al, 30 pp.  
ITALIAN, rpt, 1964. 9228599  
AEC-ORNL-Tr-454

Construction of an Electromagnetic Isotope Separator, by M. J. Samethand.  
ITALIAN, rpt, Costruzione di un Separador Electromagnetico de Isotopos, 1964.  
\*AEC

Gammone -- Program for Gamma-Ray Attenuation Through Multilayer Compton Shields, Parts I, II, by L. Criscuolo, M. G. Corisala.  
ITALIAN, rpt, GAMMONE -- Programma Monte Carlo Per il Calcolo dell'Assorbimento Dei Raggi Gamma Attraverso Schermi Laminari Compositi.  
\*AEC

Test Operation and Cost Estimation on the Waste Treatment Plant at JAERI, by Sadahiro Sakata, Masujumi Ito, et al, 50 pp.  
JAPANESE, per, Japan Atomic Energy Research Institute, Oct 1963, pp 3-22; 30-35. 9228564  
AEC-NEJ-Tr-10

Activated Sintering of Uranium Dioxide Fuel, III. Measurement of Lattice Constants by X-Ray, by Kunio Suzuki, Kazuo Maruya, et al, 12 pp.  
JAPANESE, per, Journal of the Atomic Energy Society of Japan, Vol V, No 7, 1963, pp 587-592. 9228583  
AEC-NEJ-Tr-5

Scientific  
Nuclear Science & Technology (Contd)

Isotope Separation by  $\text{CO}_2$ -Current Gas Centrifuge (D), by Akira Kanagawa, Yoichi Takashima, 23 pp.  
JAPANESE, per, Journal of the Atomic Energy Society of Japan, Vol VI, No 1, 1964, pp 20-28.  
9228585  
AEC-NSJ-Tr-29

Study of the (n,p) and n,Gamma Reactions in Some Isotopes of Low Atomic Number, by A. Trier, L. Gonzalez.  
SPANISH, rpt, Examen de Reacciones (n,p) (n,Gamma) en Algunos Isotopos de Bajo Numero Atomico con Neutrones Provenientes de la Reaccion  $\text{D(d,n)}\text{H}^3$  a E = 600 kev per el Metodo de Activacion, May 1961.  
\*AEC

Physics

Ultrasonic in Industrial Processing and Control, RUSSIA, bk.  
Consultants Bureau

Dissipation of Energy During Mechanical Vibrations, by G. S. Pisarenko.  
RUSSIA, per.  
National Lending Library

Investigations of Plasma Heating by Shock Waves in Magnetic Mirror Traps, by Yu. Ye. Nesterikhin, 50 pp.  
RUSSIAN, rpt, 1964. 9228582  
AEC-UCRL-Tr-1185(L)

Analysis of the Results of Geodetic Measurements on the Foundation of the Electromagnet for the 7-GEV Accelerator of the Institute of Theoretical and Experimental Physics, by N. I. Porubay, Yu. L. Sivkov.  
RUSSIAN, rpt, Analiz Rezultatov Geomazicheskikh Izmerenii na Fundamente Elektromagnitna Usokoritelya (I) na y Gay, Moscow, 1964, 41 pp.  
\*AEC

Instruments for Radiometry in Gaseous and Liquid Media, by M. N. Pchel'nikov, K. P. Markov, et al.  
RUSSIAN, rpt, Apparatura dlya Radiometrii Gazovykh i Zhidkikh Sred, Moscow, 19 pp.  
\*AEC

Beams, Plates and Shells on an Elastic Foundation, by V. Z. Vlasov, N. N. Leont'yev.  
RUSSIAN, bk, Balki, Plity i Obolochki na Uprugom Osnovanii, Moscow, 1960, 491 pp.  
\*NASA TT F-357  
CFSTI 65-50135

Numerical Methods in Gas Dynamics, by G. S. Roslyakov, G. F. Telenin, et al.  
RUSSIAN, bk, Chislennyye Metody v Gazovoy Dinamike, Moscow, 1963, 239 pp.  
\*NASA TT F-360  
CFSTI 65-50138

Scientific  
Physics (Contd)

Plasma Diagnostics, by R. P. Konstantinov, 273 pp.  
RUSSIAN, bk, Diagnostika Plazmy, Sbornik Statei, Moscow, 1963, 299 pp. 9228610-V  
AEC-Tr-6518

Experiments on the Storage of Electrons in a Synchrotron, by Yu. M. Ado, Ye. G. Bessonov, et al, 12 pp.  
RUSSIAN, rpt, Ekspimenty po Nakopleniyu Elektronov v Sinkhrotrone, Moscow, 1964. 9228604  
AEC-SLAC-Tr-13

Neutron Emission From Fission Fragments of U 232, U235, and Pu239, by V. F. Apalin, Yu. N. Gritsyuk, et al.  
RUSSIAN, rpt, Emissiya Neutronov iz oskolokov Deleniya U232, U235, Pu239, 1964, 16 pp.  
\*AEC

Plasma Physics and Problems of Controlled Nuclear Fusion, Conference Proceedings, 446 pp.  
RUSSIAN, bk, Fizika Plazmy i Problemy Upravlyаемого Termoyadernogo Sintez. Doklady Vtoroi Konferentsii po Fizike Plazmy i Probleme Upravlyаемого Termoyadernogo Sintez, Khar'kov, 14-19 Nov 1963. 9228771-V  
AEC-Tr-6527

Functions of an Organism Under Conditions of an Altered Gas Medium, by I. A. Aleksandrov, P. Bessonov, et al.  
RUSSIAN, rpt, Funktsii Organizma v Usloviyakh Izmenennoy Gazovoy Sredy, Moscow-Leningrad, 1964, 16 pp.  
\*AEC

Studies on Heating of Plasma by Shock Waves in a Trap With Magnetic Probes, Conducted at the Institute of Nuclear Physics, Siberian Department of the Academy of Sciences, SSSR, by Yu. E. Nesterikhin.  
RUSSIAN, rpt, Issledovaniya Nagrevu Plazmy Udarnymi Volnami v Lovushke s Magnetnymi Problemi. Provodimye v Institute Yadernoi Fiziki Sibirskogo Otdeleniya Akademii Nauk SSSR, 1964, 37 pp.  
\*AEC

Investigation of Certain Isotope Effects on the Thermodynamic Properties of Simple Fluids, by V. N. Grigor'ev.  
RUSSIAN, rpt, Issledovanie Nekotorykh Izotopnykh Effektiv v Termodinamicheskikh Svoistvakh Prostrykh Zhidkostei, Khar'kov, 1963, 146 pp.  
\*AEC

Studies of the Reaction  $\pi^+ p \rightarrow \pi^+ p + \pi^0$  for Energy 2.8 BEV, by V. K. Grigor'ev, V. K. Grishin, et al.  
RUSSIAN, rpt, Issledovanie Reaktii  $\pi^+ p \rightarrow \pi^+ p + \pi^0$  pri Energii 2.8 BEV, Moscow, 1964, 20 pp.  
\*AEC

Measurement of Neutron Radiation Dose With a Wide-Energy Spectrum, by N. A. Golovanov, N. M. Kozodseva, et al.  
RUSSIAN, rpt, Izmerenie Moshchnosti Dozy Neitronnogo Izlucheniya Shirokogo Energeticheskogo Spektra, Moscow, 110 pp.  
\*AEC

Scientific  
Physics (Contd)

Study of the Properties of Fast Moving Plasma  
Bunches, by F. F. Demichev.  
RUSSIAN, rpt, Izucheniye Svoistv Vystro-  
Dvizhushchikhsya Plazmenykh Sgustkov, Moscow,  
28 pp.  
\*AEC

Radioactive Source Calibration and Graduation of  
Radiometric and Dosmetric Instruments, by  
S. N. Baykalov, et al.  
RUSSIAN, rpt, Metody Etalonirovaya Radioaktivnykh  
Istochnikov i Gradulirovani Radiometricheskoi i  
Dozimetriceskoy Apparatury, 17 pp.  
\*AEC

Investigation of Nonstationary Oscillations in  
Nonlinear Systems, by Yu. A. Mitropol'skiy.  
RUSSIAN, rpt, Prilozheniya Metodov Teorii  
Nelineynykh Kolebaniy k Zadacham Fiziki i  
Tekhniki, Trudy Simpoziuma, Vol III, 1963,  
pp 241-274.  
\*FTD-MT-65-117

Some Problems of Telemetering of Parameters in  
Systems with Dispersed Elements, by V. I. Kurotchenko,  
N. I. Babanin.  
RUSSIAN, bk, Primeneniye Kontakt. Elementov v  
Sistemakh Avtomat. Kontrolya, Ak Nauk SSSR,  
1963, pp 3-17.  
\*FTD-MT-65-82

A Simple Presentation of the Angular Distribution  
of Decay Products From a Compound Nucleus After  
a Direct Nuclear Reaction, by V. M. Strutinskiy,  
12 pp.  
RUSSIAN, rpt, Prostoe Opisanie Uglovogo  
Raspredeleniya Produktov Raspada Sostavnogo  
Vadra Posle Pryamoi Yadernoi Reaktsii, Moscow,  
1964, pp 1-12. 9228787  
AEC-ANL-Tr-156

Thickness Measuring Device Using Radioactive  
Isotopes for Controlling the Thickness of  
Films and Sheet Materials in Their  
Manufacture, by Yu. Ya. Loznovskii, 22 pp  
RUSSIAN, bk, Radioaktivnyi Tolshchinomer  
Diia Avtomaticheskogo Kontrolia Tolshchiny  
Plenochnykh i Listovykh Materialov v  
Protseesse Ikh Osgotovleniia, 1964.  
\*CFSTI 65-50134

The Effect of Prandtl Number on the Natural Convection  
Heat of Small Particles, by T. Tahubouchi, S. Sato,  
et al.  
RUSSIAN, rpt, RPT of the Institute of High Speed Mech.,  
Vol XV, 1963, 1964, pp 179-191.  
\*FTD-MT-65-85

Weak Interactions at Opposing Electron Beams,  
by B. L. Ioffe, L. B. Okun', et al.  
RUSSIAN, rpt, Slabye Vzaimodelaniya na Vstrechnykh  
Elektronnykh Puchkakh, Moscow, 1964, 30 pp.  
\*AEC

Status and Means for Development of Multi-  
Colored Analyzers, by I. A. Krasheninnikov.  
RUSSIAN, rpt, Sovremennoe Sostoyanie i Puti  
Razvitiya Mnogokanal'nykh Analizatorov, Moscow,  
22 pp.  
\*AEC

Scientific  
Physics (Contd)

Technology of Infrared Radiation, by  
I. B. Levitin.  
RUSSIAN, bk, Tekhnika Infrazrasnykh  
Izlucheniye, Moscow, 1959, 79 pp.  
\*FTD-MT-65-133

Theory and Analysis of Straight-Through Combustion  
Chambers, by S. M. Il'yashenko, A. V. Talantov.  
RUSSIAN, bk, Teoriya i Raschet Pryamotoknykh Kamer  
Sgoraniya, Moscow, 1964, pp 1-306.  
\*FTD-MT-65-143

Post-Buckling Behavior of Cylindrical  
Shells. Finite Elastic Shells, Panels,  
Orthotropic Shells, by A. V. Pogorelov.  
RUSSIAN, bk, Tsilindricheskiye Obolochki  
pri Zakriticheskikh Deformatsiyakh.  
Organichennno Uprugkiye Obolochki, Paneli.  
Ortotropnyye Obolochki, 1963, 93 pp.  
\*FTD-MT-65-176

Angular Correlation Between Pi-Mesons and Leptons  
and Determination of Form-Factors in K-Decay,  
by I. S. Tsukerman.  
RUSSIAN, rpt, Uglovaya Korrelyatsiya Mezhd-  
Mezonom i Leptonami i Opredelenie Form-Faktorov v  
Ku3-Raspas, Moscow, 1964, 9 pp.  
\*AEC

The Effect of Magnetic Screens in the Spaces Between  
Blocks on the Operation of the Institute's Proton Syn-  
chrotron, by V. I. Simonov, S. V. Skachkov, et al.  
RUSSIAN, rpt, Vliyaniye Magnitnykh Ekranov v  
Promezhtakh Mezhd Blokami na Raboty Protonnogo  
Sinkrotroa Irei, Moscow, 1964, 10 pp.  
\*AEC

Interaction of Plasmoids With an Electromagnetic  
Wave, by V. I. Veksler.  
RUSSIAN, per, Atom Energ, Vol XVIII, No 1, 1965,  
pp 14-18.  
NASA TT F-9651

Theory of Globule-Ball Transitions in Macromolecules,  
by O. B. Ptitsyn and Yu. Ye. Ryzner, 9 pp.  
RUSSIAN, per, Biofizika, Vol X, No 1, 1965, pp. 3-6.  
JPRS 30097

Use of Bremsstrahlung Radiation From  $\beta$ -Emitters  
to Induce Photonicuclear Reactions, by I. N. Plaksin,  
N. G. Malyahveya, et al, 7 pp.  
RUSSIAN, per, Dok Ak Nauk SSSR, Vol CLVI, 1964,  
pp 803-805. 9228603  
AEC-ORNL-Tr-456

A Contribution to the Theory of Photo-  
conduction in Thin Semiconducting Layers,  
by E. I. Adirovich.  
RUSSIAN, per, Doklady Ak Nauk SSSR,  
Vol CLVII, No 2, 1964, pp 313-316.  
\*FTD-TT-65-534

A Model of Burning of Nonvolatile  
Explosives, by E. I. Maksimov and  
A. G. Meyhayou.  
RUSSIAN, per, Doklady Ak Nauk SSSR,  
Vol CLVII, No 2, 1964, pp 412-415.  
\*FTD-TT-65-534

Scientific  
Physics (Contd)

Some Optimizing Functions Of Single-Stage Production, by V. S. Tanayev, 5 pp  
RUSSIAN, per, Doklady Akademii Nauk SSSR, Vol IX, No 1, 1965, pp 11-14.  
JPRS 29893

The Rate of Formation of Radioactive Isotopes in Chondrites Under the Action of Cosmic Rays, by A. K. Lavrukhina, et al.  
RUSSIAN, per, Geokhimiya, No 12, 1964, pp 1219-1227.  
NASA TT F-9283

Toxicity Of Certain Ion-Exchange Polymers, by Ye. V. Shtanikov and V. A. Zhuravlev, 5 pp  
RUSSIAN, per, Gigiyena i Sanitariya, No 2, Feb 65, pp 21-24.  
JPRS 29849

The Relationship Between Heat Content and Velocity for the Motion of a Gas at the Boundary Layer, by I. P. Ginzburg.  
RUSSIAN, per, Inzh Fiz Zhur, Vol VII, No 8, 1964, pp 64-74.  
NASA TT F-9280

The Mechanism of the Vibration Regime of Gas-Mixture Combustion, by A. S. Aslanov, V. V. Kurzhunov.  
RUSSIAN, per, Inzh Fiz Zhur, Vol VII, No 8, 1964, pp 124-127.  
\*NASA TT F-9347

Positive Mercury Column in a Longitudinal Magnetic Field, by L. L. Artaimovich, A. V. Nedospasov, et al.  
RUSSIAN, per, Iz Ak Nauk SSSR, Ser Fiz, No 5, 1964, pp 1-125.  
\*FTD-TT-65-397

A Geometrical Interpretation of the Oscillations of an Elastically Suspended Rigid Body, by V. G. Aver'yanova and F. M. Dimentberg, 19 pp  
RUSSIAN, per, Izvestiya Akademii Nauk SSSR, Mekhanika i Mashinostroyeniye, No 6, Nov-Dec 64, pp 10-19.  
JPRS 29551

Determination of Certain Thermo-Dynamic Parameters of Substances by the Similarity Method, by B. M. Pankratov.  
RUSSIAN, per, Iz Vysokikh Ucheb Zaved. Aviat Tekh, Vol VII, No 4, 1964, pp 106-110.  
\*NASA TT F-9364

The Effect of Porosity on the Mechanical Properties of Metalceramic Copper and Cu-Al Alloy, by A. P. Savitskiy, et al.  
RUSSIAN, per, Iz Vysokikh Ucheb Zaved. Fizika, No 3, 1964, pp 34-37.  
\*NASA TT F-9363

On the Effect of Annealing in a Magnetic Field on the Magnetic and Crystal Structure of Silicon Iron, by R. A. Adameanu, et al.  
RUSSIAN, per, Iz Vysokikh Ucheb Zaved. Fiz, No 5, 1964, pp 69-74.  
NASA TT F-9267

Scientific  
Physics (Contd)

A High-Current Impulse Ion Source by M. A. Abroyan, V. L. Komarov.  
RUSSIAN, per, Nauchno-Issledovatel'skiy Institut Elektrofizicheskoy Appatury, No 1, 1963, pp 119-133.  
\*FTD-TT-65-449

The Cephalopod Body As an Airfoil, by G. V. Zuyev, 6 pp  
RUSSIAN, per, Nauchnyye Doklady Vyssney Shkoly, Biologicheskoye Nauki, No 1, 1965, pp 22-25.  
JPRS 29636

On the Origin of the Products of the Pyrolysis of Phenol-Formaldehyde Tar, by V. D. Moiseyev, M. B. Neyman, 8 pp.  
RUSSIAN, per, Plasticheskiy Massy, No 6, 1960, pp 11-13. 9696618  
FTD-TT-64-997

Latest Optical Instruments, "Karl Zeiss-Jena" National Enterprise.  
RUSSIAN, per, Priroda, No 2, 1965, pp 68-71  
\*ACSI I-5891  
ID 2204012765

Automatic Threshold Control, by E. M. Gabidulin, 9 pp  
RUSSIAN, per, Radiotekhnika i Elektronika, Vol X, No 2, 1965, pp 228-234.  
JPRS 29552

The Effect of Pulsating Light Sources on the Electrical Activity of the Human Brain, by V. A. Ul'yanok, V. G. Samsonova.  
RUSSIAN, per, Svetotekhnika USSR, Vol 7, 1963, pp 1-5. 9696854  
DDC RISC-298

Results of an Investigation of the Speed of Sound in Moving Gas-Liquid Mixtures, by N. I. Semenov, S. I. Kosterin, 13 pp.  
RUSSIAN, per, Teploenergetika, Vol XI, No 6, 1964, pp 46-51. 9228780  
AEC-WAPD-Tr-15

Speed of Sound in Two-Phase Media, by M. Ye. Deych, G. A. Filippov, 10 pp.  
RUSSIAN, per, Teploenergetika, No 8, 1964, pp 33-36. 9696780  
FTD-TT-64-1030

Results of Experiments on Discharge Nozzles with Oblique Sectioned Diffusers by M. Ye. Deych.  
RUSSIAN, per, Teploenergetika, No 12, 1964, pp 46-50.  
\*FTD-TT-65-460

Physics of Plasma Thermoelements, by A. F. Nastoyashchiy.  
RUSSIAN, per, Teplofiz Vysokikh Temperatur, Vol II, No 6, 1964, pp 927-944.  
\*FTD-MT-65-139

Scientific  
Physics (Contd)

Automatic Switching of Filters in the Recording of Abruptly Changing Luminous Fluxes, by O. I. Kasatkina, L. B. Krasul'shchikov.  
RUSSIAN, per, Trudy Glavna Geofiz Observator, No 153, 1964, pp 75-77.  
\*FTD-TT-65-551

Optical Theory of Quantum Generators on Crystals with Rapid Moving Electronics, by N. G. Basov, O. V. Bogdankevich, et al.  
RUSSIAN, per, Trudy Fiz Inst Ak Nauk SSSR, 1964, pp 1-7.  
\*FTD-TT-65-555

Theoretical Investigation of the Frequency Stability of a Maser, by A. N. Orayevskiy.  
RUSSIAN, per, Trudy Inst Fizicheskii Ak Nauk SSSR, Vol XXI, No 3, 1963, 67 pp.  
\*FTD-TT-65-186

The Thermodynamic Properties of Slags From the Point of View of the Ionic Theory, by V. A. Kozheurov.  
RUSSIAN, per, Trudy Konferentsii po Fiz-Khim Osnovam Proiz Stali, 1955, pp 413-422.  
\*AEC

Study of the Properties of Liquid Slags by the Electromotive Force Method, by O. A. Eain, B. M. Lepinskikh.  
RUSSIAN, per, Trudy Konferentsii po Fiz-Khim Osnovam Proiz Stali, 1955, pp 438-445.  
\*AEC

Investigation of the Escape of Charged Particles From a Plasma in a Magnetic Field, by L. L. Pasichnyk, O. V. Kozak, 10 pp.  
RUSSIAN, per, Ukrain Fiz Zhur, Vol VII, No 11, 1962, pp 1165-1170. 9227375  
NASA TT F-169

The Creation of an Intersecting-Beam Accelerator, by G. I. Budker.  
RUSSIAN, per, Vest Ak Nauk SSSR, No 6, 1964, pp 31-36.  
\*FTD-TT-65-482

Equations for One-Dimensional Cascade Theory of Electron-Photon Showers at Arbitrary Boundary Conditions and Appearance of Source Functions, by A. K. Bakhtadze.  
RUSSIAN, per, Vest Moskov Univ Seriya III, Fiz i Astron, No 3, 1964, pp 28-37.  
\*AEC

Particle-Like Solutions Taking Into Account Gravitation, by M. I. Stakvilevichus, 7 pp.  
RUSSIAN, per, Vest Moskov Univ Seriya III, Fiz i Astron, No 3, 1964, pp 85-90. 9227378  
NASA TT F-314

Luminosity Functions of Normal Galaxies in Photorange and Radiobands, by Yu. P. Pakovskiy.  
RUSSIAN, per, Vest Moskov Univ Fiz i Astron, No 1, 1965, pp 3-8.  
NASA TT F-9654

Scientific  
Physics (Contd)

Generalized Problem of Two Fixed Centers, by Yu. I. Ivanov.  
RUSSIAN, per, Vest Moskov Univ Seriya III Fiz Astron, No 1, 1965, pp 28-33.  
NASA TT F-9653

Investigation of a Plasma Frequency Multiplier, by A. A. Brandt, et al.  
RUSSIAN, per, Vest Moskov Univ, Seriya III Fiz Astron, No 1, 1965, pp 82-84.  
NASA TT F-9652

F<sup>+</sup>-Centers in Alkali-Halide Crystals, by P. F. Tsvetsovich.  
RUSSIAN, per, Zhur Eksp i Teor Fiz, Vol XI, 1951, pp 1223-1226.  
ABC-IB-Tr-14

Application of the Theory of Information to Photographic Systems, by D. S. Lebedev.  
RUSSIAN, per, Zhur Nauch i Prikl Fotograf i Kinematograf, Vol X, No 1, 1965, pp 62-71.  
\*NASA TT F-9387

Oxidation of Hydrogen on a Porous Nickel Electrode, by O. S. Kasenzhek, E. A. Kalinovskii, 8 pp.  
RUSSIAN, per, Zhur Priklad Khim, Vol XXXVII, No 6, 1964, pp 1256-1260. 9096306  
Amer Meteorol Soc  
T-R-457

Stimulated Raman Scattering Within a Primary Laser Resonator, by B. I. Stepanov, P. A. Apanasevich.  
RUSSIAN, per, Zhur Priklad Spektroskop, Vol II, 1965, No 1, pp 37-44.  
\*FTD-MT-65-144

A Method of Determining the Light Efficiency of Laser Pumping Systems, by A. A. Kaminsky, I. L. S. Korniyenko.  
RUSSIAN, per, Zhur Priklad Spektroskop, Vol VII, No 1, 1965, pp 87-89.  
\*FTD-MT-65-144

Stress Analysis by the Optical Method, by V. L. Ginsburg.  
RUSSIAN, per, Zhur Tekh Fiz, Vol XIV, No 3, 1944, pp 181-192.  
\*NASA TT F-9327

Investigation of the Interaction of Plasma Flows in a Transverse Magnetic Field, by V. G. Zykov, et al.  
RUSSIAN, per, Zhur Tekh Fiz, Vol XXXIV, No 8, 1964, pp 1417-1423.  
NASA TT F-9282

Regge Action of High Singularity Potential and Non-Regional Potential, by Tai Yuan-pen (2071 0337 2609), 22 pp.  
CHINESE, per, K'o-hsueh T'ung-pao, No 2, 1965, pp 95-106.  
JPRS 29641

Scientific  
Physics (Contd)

Non-Linear Stability Problem of Round Bottom Thin Spherical Shells, by Yeh K'ai-yuan (5509 7030 3104), Liu Jen-huai (0491 0086 2037), P'ing Ch'ing-yuan (1627 1987 0337) and Li Szu-lai (2621 1835 0171), 8 pp.

CHINESE, per, K'o-hsueh T'ung-pao, No 2, 1965, pp 1142-1145.  
JPRS 29597

Non-Linear Stability Problem of Round Bottom Thin Spherical Shells, by Yeh K'ai-yuan (5509 7030 3104), Liu Jen-huai (0491 0086 2037), Chang Ch'uan-chih (1728 0278 2535), and Hsu I-fan (1776 0001 1581), 6 pp.

CHINESE, per, K'o-hsueh T'ung-pao, No 2, 1965, pp 1145-1147.  
JPRS 29597

Chromatographic Quantitative Analysis by Hydrogen Ionization Detector, by Li T'ai-ch'ien (2621 1132 6197) and P'eng Shao-i (1756 11421 6654), 8 pp.

CHINESE, per, K'o-hsueh T'ung-pao, No 2, 1965, Feb 1965, pp 151-153.  
JPRS 29597

Harmonic Analysis of Unitary Groups, by Hua Lo-keng, 22 pp

CHINESE, per, K'o-hsueh T'ung-pao, No 3, 1965, 17 Mar 65, pp 202-212  
JPRS 29702

Non-Linear Stability Problems Of Round Bottom Thin Spherical Shell, by Liu Jen-huai (0491 0086 2037), 6 pp

CHINESE, per, K'o-hsueh T'ung-pao, No 3, 1965, 17 Mar 65, pp 253-255.  
JPRS 29821

On the Dynamic Analysis and Modeling of Some Sensitive Elements, by Ku Fan-chi (7357 0028 0644), Ch'en Chuan-chuan (7115 0273 3197), and Wang Hsiang-sheng (3769 3276 3932), 10 pp

CHINESE, per, K'o-hsueh T'ung-pao, No 3, 17 Mar 65, pp 264-268  
JPRS 29821

On High Magnetic Alnico Permanent Magnet, by Chih-ting (4249 0002), 7 pp.

CHINESE, per, Wu-hsien-tien Chi-shu, No 3, 11 Sep 64, pp. 28-30.  
JPRS 29968

Change of Tube Wall Thickness at Drawing, by Bohumil Pocka, V. M. Molotova.

CZECH, per, Hutnické Listy, Vol X, No 4, 1955, pp 194-200.  
\*AEC

Artificial Raising of Air Pressure, by M. J. Pavlov, 7 pp.

CZECH, per, Specialni Hygiena Letce, 1954, pp 24-27. 9696626  
FTD-TT-65-258

Scientific  
Physics (Contd)

Stress Waves and Movement of Bodies, by

Josef Henrych, 22 pp.  
CZECH, per, Strojnický Casopis, No 1, 1964, pp 20-37. 9696617  
FTD-TT-64-843

Simple Models for Usual Media of Thermalization, by Jean-Louis Soule, 43 pp.

FRENCH, rpt, 1964. 9228608  
AEC-EURAEBC-1202

Measurements of Cross Sections of Fission Induced by Protons of 156 MeV, Using Mica as the Detector of Fission Fragments, by M. Maurette, C. Stephan. FRENCH, rpt, 22-26 Mar 1965.  
\*AEC

Measurements of the Ionosphere Temperature on the Basis of Molecular Fluorescence Induced Artificially by Means of Rockets, by P. Authier.

FRENCH, per, Annales de Geophysique, Vol II, No 4, 1964, pp 353-382.  
\*AEC

The Estimation of Hydrogen Isotopes and Their Allotropic Forms in Gaseous Phase, by R. Vaillard.

FRENCH, per, Comptes Rendus, Vol CCXVII, 1943, pp 349-351.  
\*AEC-E-Rwell

Infrared Spectroscopy Study of Organosilicon Compounds, by Annette Marchand, Marie-Therese Porel, et al, 31 pp.

FRENCH, per, J de Chimie Physique et de Physico-Chimie Biologique, Vol LXXI, No 3, 1964, pp 343-362.  
9696500

DDC RSC-377

Electrochemical Research on Ruthenium by the Method of Radioactive Tracers. I. Anodic Processes, by M. A. El Guebely, M. Haissinsky, 19 pp.

FRENCH, per, Journal de Chimie Physique, Vol LII, 1954, pp 290-295. 9228784  
AEC-NP-Tr-1214

Electrochemical Research on Ruthenium by the Method of Radioactive Tracers. II. Cathodic Deposit; Applications, by M. Haissinsky, M. A. El Guebely, 20 pp.

FRENCH, per, Journal de Chimie Physique, Vol LIII, 1956, pp 744-752. 9228612  
EC-NP-Tr-1225

The Physics of Corona Discharges in Solid Dielectrics, by B. Heller, J. Chladak, 22 pp.

GERMAN, per, Acta Technica, Vol IX, 1964, pp 1-16. 9228613  
AEC-EC-T-63-714

Heterocyclic Azo Dyes Produced by Oxidative Coupling, by S. Hung, et al.

GERMAN, per, Angewandte Chemie, Vol LXX, pp 215-222.  
Patent Office

Electron Diffraction and Bremsung, by A. Sommerfeld, 80 pp.

GERMAN, per, Annalen der Physik, 5 Series, Vol XI, No 3, 1931, pp 257-380. 9696510  
Amer Meteorol Soc  
T-G-217



Scientific  
Physics (Contd)

The New Institute for Reactor Safety, by H. Karr.  
GERMAN, per, Atomwirtschaft, Vol X, 1963,  
pp 140-141.  
\*AEC

A Novel Method of Temperature Compensation  
in Strain Gauge Rosettes, by L. Balazs,  
M. Fischer.  
GERMAN, per, Materialprüfung, Vol VI,  
Aug 1964, pp 283-285.  
BIBI 3936

Evaluation of Optical-Pyrometric Temperature  
Measurements, by J. Verch.  
GERMAN, per, Optik, Vol XIX, No 12, 1962,  
pp 640-651.  
\*NASA TT F-9359

Investigation of the Plastic Range of Neutron-Irradiated  
Single Copper Crystals. I. Electronmicroscopic and  
and Mechanical Investigation of Samples Before and  
After Annealing, by Ch. Schwink, G. Grieshammer,  
16 pp.  
GERMAN, per, Physica Status Solidi, Vol VI, 1964,  
pp 665-678. 9228592  
AEC-ANL-Tr-151

Investigation of the Plastic Range of Neutron-Irradiated  
Single Copper. II. Cinematographic Measurement of  
the Strain Rate of Unannealed and Annealed Samples,  
by Ch. Schwink, H. Neuhauser, 19 pp.  
GERMAN, per, Physica Status Solidi, Vol VI, 1964,  
p 679. 9228783  
AEC-ANL-Tr-154

On the Interpretation of Low-Temperature Electron  
Irradiation in Metals. II. Kinetics of the Crowdion-  
Vacancy Annihilation and the Recovery Stage I<sub>g</sub>  
in Copper, by W. Frank, A. Seeger, et al, 19 pp.  
GERMAN, per, Physica Status Solidi, Vol VIII,  
1965, pp 345-356. 9228793  
AEC-AI-Tr-72

Investigation of the Superconduction of the Zr-E<sub>2</sub>  
Alloy System, by Werner Buckel, Gerald Dummer,  
et al, 14 pp.  
GERMAN, per, Physik Kondensierten Materie, Vol I,  
1963, pp 67-77. 9228591  
AEC-ANL-Tr-152

Examination of the Influence of Subject Contrast on  
Mean Film Density; Problems Arising in Connection  
with the Use of Automatic Exposure Timers,  
by L. Widenmann, M. Wember, et al.  
GERMAN, per, Röntgen-Blätter, No 4, Vol XV, 1962,  
pp 97-107.  
National Bureau of Standards

Photogrammetric Determination of the Loading of High  
Structures, by K. Dresdner.  
GERMAN, per, VEB Kombinat Schwarze Pumpe, GDR.  
\*FTD-TT-65-401

An Accelerometer on the Basis of Magnetostriction,  
by Hans Wilde, Erwin Eisels, 33 pp.  
GERMAN, per, Z fuer Angewandte Physik, No 1,  
1949, pp 359-366. 9228615  
AEC-UCRL-Tr-1178(L)

Scientific  
Physics (Contd)

Reversible Hits, by W. Dittrich.  
GERMAN, per, Z fuer Naturforschung, Vol XIIb,  
1957, pp 536-541.  
\*AERE-Harwell

The Linear Energy Transfer in the Hit Theory,  
by W. Dittrich.  
GERMAN, per, Z fuer Naturforschung, Vol XVIIb,  
No 6, 1961, pp 398-402.  
\*AERE-Harwell

Relaxation Oscillations in the Emission of Ruby Lasers  
Under Various Operational Conditions, by Karl Gurs,  
13 pp.  
GERMAN, per, Z fuer Naturforschung, Vol XVIIIa, No 4,  
1963, pp 510-515. 9696308  
Amer Meteorol Soc  
T-G-213

The Space-Charge Zone at the Arc Plasma Boundary,  
by G. Ecker, 17 pp.  
GERMAN, per, Z fuer Physik, Vol CXXXV, 1953,  
pp 105-118. 9228782  
AEC-AI-Tr-71

Ion Reflection and Secondary Electron Emission During  
Impact of Alkali Ions on Pure Molybdenum Surfaces,  
by Curt Brunnee, 29 pp.  
GERMAN, per, Z fuer Physik, Vol CXLVII, 1957,  
pp 161-183. 9228791  
AEC-ORNL-Tr-467

The Superconductivity of Ti- and Zr-Bi-Alloys,  
by Ch. J. Raub, C. A. Andersen, 11 pp.  
GERMAN, per, Z fuer Physik, Vol CLXXV, 1963,  
pp 105-114. 9228600  
AEC-ANL-Tr-153

An Easy Method for the Accurate Determination  
of the Heavy Hydrogen Isotope by Thermal  
Conductivity, by H. Sachsse, K. Bratsler.  
GERMAN, per, Z fuer Physikalische Chemie,  
Vol CLXXIIa, 1954, pp 331-340.  
\*AERE-Harwell

Application of the Similarity Theory to  
the Study of Transport Processes, by  
G. Fay, B. Zselev, 18 pp.  
HUNGARIAN, per, A Magyar Tudomanyos  
Akademia Muszaki Tudomanyok Osztalyanak,  
Vol XXXIII, No 1, 1964, pp 351-363.  
9696606  
FTD-TT-64-1346

Hungarian Research on the Physics of the Atmosphere,  
by Desi Frigyes, 5 pp.  
HUNGARIAN, per, Idojaras, No 5, Sept-Oct 65, pp. 287-  
291.  
JPRS 30006

A Method for Determination of Residual  
Stresses, by L. Gribovszki, 12 pp.  
HUNGARIAN, per, Kohaszati Lapok, Vol XC,  
No 10, 1962, pp 458-462. 9696610  
FTD-TT-64-726

Scientific  
Physics (Contd)

Annual Report of the Japanese Association for Radiation Research on Polymers.  
JAPANESE, rpt, Nippon Koshansen Kenbunshi Kenkyu Kyokai Nempo, Vol V, 1963-1964, 254 pp.  
\*AEC

Some New Freeze Photoelastic Materials and Their Application, by Katsuhiko Ito, Rikagaku Kenkyusho Hokoku.  
JAPANESE, rpt, Reports of the Institute of Physical and Chemical Research, Tokyo, Vol XXX, No 4, 1954, pp 233-248. 9696640  
DDC RSIC-383

Current Status of the Chinese Scientific World: Progress in Physics in China, by O. Kamei, 8 pp.  
JAPANESE, per, Ajiya Keizai Junpo, No 605, 11 Mar 65, pp. 8, 9, 11-14.  
JPRS 30087

The Spectrum Matrix Method in Y-Ray Transmission Problems for Multiple Layers, by A. Tsuruo, 12 pp.  
JAPANESE, per, Nihon Genshi-Ryoku Gakkaishi, Vol VI, No 2, 1964, pp 91-97. 9228797  
AEC-NP-Tr-1217

Distribution of Electromagnetic Field and Current in the Ground in the Case of a Vertical Antenna, by I. Constantinescu, 13 pp.  
RUMANIAN, per, Telecomunicatii, Vol VII, No 2, 1963, pp 45-50. 9696609  
FTD-TT-65-78

Study of the (n,p) and n,Gamma Reactions in Some Isotopes of Low Atomic Number, by A. Trier, L. Gonzalez.  
SPANISH, rpt.  
\*AEC

Ion Source for an Isotope Separator, by M. J. Samethand.  
SPANISH, rpt, 1964.  
\*AEC

Construction of an Electromagnetic Isotope Separator, by M. J. Samethand.  
SPANISH, rpt, 1964.  
\*AEC

Calculation of Flow of a Hypersonic Gas Stream Directed Around Axiallysymmetrical Bodies, by A. M. Antonov, 7 pp.  
UKRAINIAN, per, Ak Nauk Ukrain RSR, Dopovidi, No 2, 1964, pp 188-193.  
FTD-TT-64-1005

Scientific  
Miscellaneous

Cybernetics, Thought, and Life, 491 pp  
RUSSIAN, bk, Kibernetika, Myshleniye, Zhizn', 1964, pp 1-511.  
JPRS 29764

Alphabetical Index of Articles Published in the Journal Geodeziya i Kartografiya, 1964.  
RUSSIAN, per, Geodeziya i Kartografiya, Dec 1964, pp 75-80.  
\*ACSI I-6914

From the Committee On Lenin Prizes in the Field of Science and Technology, Of the Council Of Ministers USSR, 9 pp.  
RUSSIAN, np, Izvestiya, 18 Feb 65, p. 3.  
JPRS 29936

The Necessity of Planning and Coordinating Scientific Research, by D. Bryukov, V. Pigarevsky, and G. Vartanyan, 6 pp.  
RUSSIAN, np, Meditsinskaya Gazeta, 5 Jan 1965, p 1-2.  
JPRS 29650

Increasing the Effectiveness of Scientific Research At Branch Institutes, 6 pp.  
RUSSIAN, per, Meditsinskaya Promyshlennost' SSSR, No 3, Mar 65, pp. 3-6.  
JPRS 30010

Problems of Scientific Information Development in the Republic of Cuba, by A. N. Jimenez and O. I. Globachev, 15 pp.  
RUSSIAN, per, Nauchno-tekhnicheskaya Informatsiya, No 1, 1965, pp 48-53.  
JPRS 29601

Foreword, General Information, Natural Conditions.  
RUSSIAN, per, Spravochnik Proektirovshchika, pp 1, 2, 38, 39, 40.  
\*ACSI I-6548  
ID 2204004165

Research of the Principles Underlying Scientific-Technical Progress, by Ladislav Kubic, 13 pp  
CZECH, per, Nova Mysl, No 3, Mar 65, pp 371-377  
JPRS 29806

Development of Czechoslovak Science Since World War II, Frantisek Sorm, 18 pp.  
CZECH, per, Nova Mysl, No 4, Apr 65, pp. 434-444.  
JPRS 30091

Introductory Address Of the President Of the Academy of Sciences USSR Academician M. V. Keldysh, 10 pp  
RUSSIAN, per, Vestnik Akademii Nauk SSSR, No 3, Mar 65, pp 5-10.  
JPRS 29854

Scientific  
Miscellaneous (Contd)

Activity Of the Academy Of Sciences Of the Estonian  
SSR, 5 pp.  
RUSSIAN, per, Vestnik Akademii Nauk SSSR, No 3, 1965,  
pp. 125-127.  
JPRS 30153

Resolution of the Presidium of the Hungarian  
Academy of Sciences Concerning the Regulation and  
Reorganization of Certain Committees, by Istvan  
Rusznayak, 6 pp  
HUNGARIAN, per, Akademiai Kozlony, Vol XIV, No 4,  
16 Mar 65, pp 33-36.  
JPRS 29807

The Presence of Rumanian Science Abroad, by Prof  
Dumitru Dumitrescu, 7 pp  
ROMANIAN, per, Stiinta si Tehnica, Vol 17, No 3,  
Mar 65, pp 3-5.  
JPRS 29804

INFORMATION RECEIVED DURING MAY  
ON COVER-TO-COVER TRANSLATIONS

Acta Biochimica Polonica, Vol XI, No 2, 3,  
1964.  
OTS 64-11406/2-3

Acta Biochimica Polonica, Vol XI, No 1-4,  
1964.  
PL 480  
OTS 64-11406/4

Acta Poloniae Pharmaceutica, Vol XXI, No 1,  
1964.  
OTS 64-11412/1

Aviatsiya i Kosmonavtika, No 8, 1964.  
FTD-ST-64-8

Aviatsiya i Kosmonavtika, No 9, 1964.  
FTD-ST-64-9

Avtomatika i Telemekhanika, Vol XXV, No 11,  
1964.  
Instr Soc of Amer

Byulleten' Moskovskogo Obshchestva Ispytatelei  
Prirody, Otdel Geologicheskii, Vol XXXII,  
No 4, Jul-Aug 1957.  
IPST

Byulleten' Moskovskogo Obshchestva Ispytatelei  
Prirody, Otdel Geologicheskii, Vol XXXII,  
No 5, Sep, Oct 1957.  
IPST

Byulleten' Moskovskogo Obshchestva Ispytatelei  
Prirody, Otdel Geologicheskii, Vol XXXII,  
No 6, Nov, Dec 1957.  
IPST

Doklady Akademii Nauk SSSR, Biochemistry,  
Vol CLIV-CLVI, No 1-6, Jan-Jun 1964.  
CB

Doklady Akademii Nauk SSSR, Biophysics,  
Vol CLIV-CLVI, Jan-Jun, No 1-6, 1964.  
CB

Doklady Akademii Nauk SSSR, Earth Science  
Sections, Vol CLVII, Sep, Oct 1963.  
Amer Geol Inst

Doklady Akademii Nauk SSSR, Physical Chemistry,  
Vol CLIV, No 1-6, Jan, Feb 1964.  
CB

Doklady Akademii Nauk SSSR, Physical Chemistry,  
Vol CLV, No 1-6, Mar, Apr 1964.  
CB

Elektrosvyaz', Vol XVIII, No 10, 1964.  
Scripta Technica

Fiziologiya Rastenii, Vol XI, No 1, Jan,  
Feb 1964.  
CB

Folia Morphologica, Vol XXIII, No 1, 1964.  
OTS

Inzhenernyy Zhurnal, Vol V, No 1, Jan-Mar  
1965.  
JPRS 29837

Izmeritel'naya Tekhnika, No 10, 1964.  
Instr Soc of Amer

Izmeritel'naya Tekhnika, No 11, 1964.  
Instr Soc of Amer

Izvestiya Akademii Nauk SSSR, Seriya Fiziches-  
kaya, Vol XXVIII, No 4, 1964.  
CTT

Izvestiya Akademii Nauk SSSR, Seriya  
Fizicheskaya, Vol XXVIII, No 5, 1964.  
CTT

Izvestiya Akademii Nauk SSSR, Seriya Khimi-  
cheskaya, No 5, 1964.  
CB

Izvestiya Akademii Nauk SSSR, Seriya  
Khimicheskaya, No 6, 1964.  
CB

Izvestiya Ak Nauk SSSR, Otdel Tekh Nauk, Tekh  
Kibernetika, No 2, 1965. (SF-3659/2)  
\*JPRS

Izvestiya Vysshikh Uchebnykh Zavedeniy,  
MVISSO SSSR, Priborostroyeniye, Vol VIII, No 1,  
1965.  
JPRS 30110

Izvestiya Vysshikh Uchebnykh Zavedeniy  
MVISSO SSSR, Radiofizika, Vol VII, No 6,  
Nov, Dec 1964.  
JPRS 30060

Izvestiya Vysshikh Uchebnykh Zavedeniy,  
Radiotekhnika, Vol VII, No 4, Jul, Aug 1964.  
JPRS 28085

Izvestiya Vysshikh Uchebnykh Zaved, Radio-  
fizika, Vol VIII, No 1, 1965. (NY-9728/1)  
\*JPRS

Izvestiya Uchebnykh Zavedeniy Radiotekhnika,  
Vol VIII, No 1, 1965. (NY-9754/1)  
\*JPRS

Kolloidnyi Zhurnal, Vol XXVI, No 3, May,  
Jun 1964.  
CB

Metallurg, No 5, 6, 1964.  
CB

Metallurg, No 7, 8, 1964.  
CB

Mikrobiologiya, Vol XXXIII, No 3, May,  
Jun 1964.  
CB

Nachrichtentechnische Zeitschrift, No 3,  
1965.  
\*JPRS

Optika i Spektroskopiya, Vol XVIII, No 1,  
1965.  
Opt Soc of Amer, Inc.

Pochvovedeniye, No 7, 1964.  
Soil Sci Soc of Amer, Inc.

Polski Przegląd Radiologii i Medycyny  
Nuklearnej, Vol XXVIII, No 1, 1964.  
OTS 64-11415/1

Polski Tygodnik Lekarski, Vol XIX, No 1,  
OTS  
Vol III, No 4

Poroshkovaya Metallurgiya, No 2(14), Mar  
Apr 1963.  
CB

Przeglad Epidemiologiczny, Vol XVIII,  
No 1, 2, 1964.  
OTS 64-11414/1-2

Radiokhimiya, Vol V, No 3, May, Jun 1963  
CB

Radiokhimiya, Vol V, No 4, Jul, Aug 1963  
CB

Radiotekhnika, Vol XIX, No 10, 1964.  
Scripta Technica

Steklo i Keramika, Vol XXI, No 1, 2, 1964.  
CB

Steklo i Keramika, Vol XXI, No 3, 4, 1964.  
CB

Teoriya Veroyatnostei i ee Primeneniya,  
Vol IX, No 1, 1964.  
SIAM

Tsvetnye Metally, Vol XXXVI, Dec 1963.  
Primary Sources  
Vol IV, No 12

Uspekhi Fizicheskikh Nauk, Vol LXXXIV,  
No 1, 2, Mar, Apr 1965.  
Amer Inst of Phys  
Vol VII, No 5

Vestnik Akademii Meditsinskikh Nauk SSSR,  
Vol XX, No 4, 1965. (NY-9565/4)  
\*JPRS

Zavodskaya Laboratoriya, Vol XX, No 11, 1964  
Instr Soc of Amer

Zhurnal Eksperimental'noi i Teoreticheskoi  
Fiziki, Vol XLVII, No 4, Oct 1964.  
Amer Inst of Phys  
Sov Phys-JETP  
Vol XX, No 4

Zhurnal Obshchei Khimii, Vol XXXIV, No 2,  
1964.  
CB

Zhurnal Obshchei Khimii, Vol XXXIV, No 3,  
1964.  
CB

Zhurnal Prikladnoi Khimii, Vol XXXVII, No 4,  
1964.  
CB

Zhurnal Prikladnoi Khimii, Vol XXXVII, No 5,  
1964.  
CB

Zhurnal Strukturnoi Khimii, Vol V, No 2,  
Mar, Apr 1964.  
CB

**ACTA BIOCHIMICA POLONICA**  
Vol XI, No 1-4, 1964

CONTENTS

Preface to no. 1 . . . . .	1
M. Kujawski, Improved method for preparation of limit dextrin substrate by using barley malt . . . . .	3
T. Chojnacki, On the <i>in vitro</i> formation of phospholipids containing unnatural bases, via the cytidine mechanism . . . . .	11
L. Zelewski, Citrate synthesis in the kidney and liver of rats treated with nicotinamide and oestradiol benzoate . . . . .	25
Alina Taylor, Purification and properties of the Vi-phage receptor from <i>Salmonella typhi</i> . . . . .	33
B. Zagalak and J. Pawelkiewicz, Synthesis and properties of some analogues of the corrin coenzymes . . . . .	49
P. Szafranski and S. Kłita, Soluble ribonucleic acid and polymerization of amino acids . . . . .	61
P. Szafranski, Jadwiga Lutewicz and Lidia Pużyńska, Ribonucleic acid from the silk gland of the silkworm and the amino acid code . . . . .	71
Preface to no. 2-3, dedicated to the memory of Prof. Dr. Bolesław Skarżyński . . . . .	83
S. Ludewig and A. Chanutin, Effect of salts and pH on the organic and inorganic phosphates in human red cell haemolysate . . . . .	85
J. Kawiak, Arylsulphatase C activity in rat cartilage . . . . .	91
K. Ostrowski, Z. Dąbryniewicz, W. Sawicki and Zofia Stecka, Dry mass of epithelial cells from the vagina of mice in the course of the oestrus cycle measured by interference microscope . . . . .	99
J. Hořejší and Libuše Miroševová, A contribution to the study of glutathione synthesis by the human erythrocyte . . . . .	107
Zofia Perembeka and Irena Mechnacka, The ornithine cycle in <i>Celerio euphorbiae</i> . . . . .	113
Janina Dziulyska, Krystyna Krajewska and J. Gill, Serum glycoproteins in some species of non-domesticated mammals . . . . .	121
Janina Dziulyska and Krystyna Krajewska, Serum glycoproteins in some species of birds . . . . .	129
Maria M. Jędruska, B. Górecki and J. Heller, Utilization of [1- <sup>14</sup> C] glycine in purine biosynthesis in <i>Helix pomatia</i> . . . . .	133
Helena Zającka and R. Pakula, Biological effects of renaturation of mixtures of genetically different DNA's of <i>Bacillus subtilis</i> . . . . .	139
Janina Opińska-Blaż, M. Charkowski and H. Berbet, Tryptophan in erythrocytes and plasma of man and some animals . . . . .	147
Miroslawa Weber, Annie Reardon, M. E. Rivière, R. Vendrely and Colette Vendrely, Incorporation of <sup>32</sup> P into nucleic acids and phospholipids of the livers of tumour-bearing rats . . . . .	153
P. Szafranski, S. Porzycki and Barbara Krasicka, Decomposition of ribonucleic acid from the liver microsomal fraction . . . . .	169

(Continued)

Available From PL 480

OTS 64-11406/4

**ACTA BIOCHIMICA POLONICA**

Vol XI, No 1-4, 1964

**CONTENTS (Contd)**

<b>M. Zydowe and Jadwiga Purzycka, Comparative studies on glutamine content in animal tissues . . . . .</b>	<b>165</b>
<b>Margaret E. Gregory and S. K. Ken, The forms of phosphorylated thiamine in the milks of different animals . . . . .</b>	<b>169</b>
<b>Irena Pietrzykowska and D. Shugar, Thermal reactivation of ultraviolet inactivated bacteriophages . . . . .</b>	<b>179</b>
<b>Krystyna Beliecka, Teresa Laskowska and Irena Mechnacka, Hydroxylation of phenylalanine in insects and some vertebrates . . . . .</b>	<b>191</b>
<b>W. Bicz and Barbara Broniszewska-Ardelt, The effect of 2-deoxy-D-glucose on aerobic and anaerobic glycolysis in neoplastic cells and tissues . . . . .</b>	<b>197</b>
<b>Maria Guminska and Zofia Perwit-Bébr, Metabolism of phosphorus compounds in mouse embryo cells grown in vitro and infected with SE polyoma virus . . . . .</b>	<b>203</b>
<b>A. Kej and J. Frende, Studies on sulphaemoglobin formation . . . . .</b>	<b>211</b>
<b>Maria Sarnecka-Keller, Jadwiga Noworytko and Stanisława Kos, Isolation and preliminary fractionation of urinary peptides by means of gel filtration . . . . .</b>	<b>221</b>
<b>Z. Szafran and Halina Szafran, Arylsulphatase from pig intestinal mucosa . . . . .</b>	<b>227</b>
<b>T. W. Szczechowski, T. Żebro and J. Stachura, Radioprotective properties of cysteinethiosulphonate . . . . .</b>	<b>235</b>
<b>Z. Walczak and Wł. Ostrowski, Nucleolytic enzymes of <i>Thiobacillus thioparus</i>. II. Ribonucleases and their properties . . . . .</b>	<b>241</b>
<b>J. M. Zgliczyński and Teresa Stelmassyska, The effect of metabolic products of cystine on the activity of glyceraldehyde-3-phosphate dehydrogenase . . . . .</b>	<b>253</b>
<b>Barbara Bulhak and Irena Chmielewska, Utilization of infused protein hydrolysate by human subjects. VI. The constituents of non-ampholytic fraction of hydrolysate . . . . .</b>	<b>261</b>
<b>P. Dworsky and O. Hoffmann-Ostenhof, L-2-Aldonic acid dehydrogenase from <i>Schwanniomyces occidentalis</i> . . . . .</b>	<b>269</b>
<b>J. Kleier and Barbara Biczowa, The five-membered disulphide ring system. III. Antineoplastic potentialities . . . . .</b>	<b>279</b>
<b>N. B. Myant and Jill Ilmfe, On the possible role of tricarboxylic acids in the control of fatty acid synthesis . . . . .</b>	<b>283</b>
<b>J. Krawczyński, K. Grajert, Jolanta Raczyska, Irena Drewnawska, Elżbieta Walańska and Krystyna Ilowicka, Isolation of non-haemoglobin proteins of the red blood cell by the use of Rivanol . . . . .</b>	<b>305</b>
<b>H. von Euler, Thin-layer electrophoresis of blood and serum of various animals . . . . .</b>	<b>311</b>
<b>K. Yagi and S. Yamada, Studies on the administration of riboflavin-5'-monosulphate . . . . .</b>	<b>315</b>
<b>A. Brzezicki and B. Filipowicz, Thiamine and thiamine esters in the guinea pig liver in experimental diphtherial toxemia . . . . .</b>	<b>323</b>
<b>V. Chmelař, I. M. Hale and Milena Hořáková, <math>\gamma</math>-Aminobutyric acid content in rat brain processed under different temperature conditions . . . . .</b>	<b>327</b>
<b>A. F. Richter and Božena Čejková, On the nature of proteolysis by chloroethanols . . . . .</b>	<b>337</b>
<b>T. Chojnacki and T. Korzybski, On the use of <math>^{32}</math>P-labelled cytidine diphosphate bases for the in vitro studies on the methylation of phospholipids with S-adenosylmethionine . . . . .</b>	<b>341</b>
<b>Konstancka Racz, Maria Raczewska and Irena Gęsińska, Studies on the imidazolytic and exchange reactions of NADase from carp liver mitochondria . . . . .</b>	<b>347</b>

(Continued)

Available From PL 480

OTS 64-11406/4

# ACTA BIOCHIMICA POLONICA

Vol XI, No 1-4, 1964

## CONTENTS (Contd)

H. Theorell and T. Yonetani, The complexes of NADH and NAD with liver alcohol dehydrogenase at pH 10 . . . . .	355
Leokadia Klyszejko and A. Dmochowski, Fractionation of histones from cell nuclei of ox pancreas . . . . .	363
M. Schmidt and A. Dmochowski, The acid mucopolysaccharides of normal and atherosclerotic human aorta . . . . .	371
K. Murawski and K. Zakrzewski, Sulphydryl groups and haem-globin linkage . . . . .	379
I. Huszák and L. Durkó, Formation of indole-pyridoxal complex in the urine of schizophrenics . . . . .	389
Aleksandra Kubies and Wanda Melbaum-Kaiszenellenbogen, On the use of tannin for the preparation of glycoprotein hormones from hog pituitary gland . . . . .	395
Z. Vedrák, Hana Šipalová and Z. Brkal, The interaction of the $\alpha$ - and $\beta$ -chains of human globin with zinc ions . . . . .	403
Irena Kąkol, J. Gruda and S. Bitny-Szlachta, A study on the role of SH groups of myosin by means of $\beta$ -hydroxyethyl-2,4-dinitrophenyl disulphide . . . . .	411
W. Drabikowski and S. Bitny-Szlachta, Studies on sulphydryl groups of actin . . . . .	421
Stella Niemierko and W. Niemierko, Behaviour of some phosphorus compounds and carbohydrates in the wax moth during anoxia and postanoxic recovery . . . . .	429
W. Bicz and Barbara Biczewa, Glucose, lactate and pyruvate in the blood of guinea pigs after electrical stimulation of the brain . . . . .	445
T. Berkowski and Krystyna Sikorska, Quantitative determination of deoxyribonucleic acid in brain tissue . . . . .	451
J. Umiastowski, AMP aminohydrolase in the muscles of some vertebrates and invertebrates . . . . .	459
S. Magas and Danuta Redynkewa, Movement of iodide, bromide and chloride across the gastric wall in the rat . . . . .	465
W. Drabikowski and J. Płazek, Studies on some aspects of depolymerization of F-actin . . . . .	471
Daniela Barasz and D. Shugar, Influence of temperature on the stability of the acid and alkaline forms of polyriboadenylic acid . . . . .	481
Halma Sierakowska, J.-E. Edström and D. Shugar, Intracellular localization of nuclease enzymes by a microdissection-microelectrophoretic technique . . . . .	487
Barbara Żmudzka and D. Shugar, Preparation and chemical and enzymic properties of cyclic phosphates of D-glucopyranose and synthesis of derivatives of N-(D-glucopyranosyl) pyridine . . . . .	509
B. Lipiński, A. E. Budzyński, E. S. Latała and E. Kowalski, Isolation and characterization of cold-insoluble fibrinogen complex . . . . .	527

### Books reviewed:

J. K. Aikawa, The Role of Magnesium in Biologic Processes (T. Chojnacki) . . . . .	R1
E. Chargaff, Essays on Nucleic Acids (P. Szafranski) . . . . .	R1
Comprehensive Biochemistry, vols. 5 and 10; M. Florkin & W. H. Stoltz, eds. (W. Morawski) . . . . .	R2
L. Sunshine and S. R. Gerber, Spectrophotometric Analysis of Drugs including Atlas of Spectra (M. Zydowo) . . . . .	R3
Phenylketonuria; F. L. Lyman, ed. (J. Heller) . . . . .	R3

(Continued)

Available From PL 480  
OTS 64-11406/4



ACTA BIOCHIMICA POLONICA

Vol XI, No 1-4, 1964

CONTENTS (Contd)

Enzyme Chemistry of Phenolic Compounds; J. B. Pridham, ed. (J. Heller)	R5
F. C. Reubi, Clearance Tests in Clinical Medicine (A. Manitius)	R6
F. B. Straub, Biochimija (T. Korzybski)	R8
Comprehensive Biochemistry, vol. 8; M. Florkin & E. H. Stoltz, eds. (W. Mozolowski)	R9
Nobel. The Man and his Prizes (W. Mozolowski)	R10
Physical Properties of the Steroid Hormones; L. L. Engel, ed. (J. Sup- niewski)	R12
Progress in Biophysics and Molecular Biology; J. A. V. Butler & H. E. Huxley, eds. (D. Shugar)	R13
Deoxyribonucleic Acid — Structure, Synthesis and Function (D. Shugar)	R15
H. McIlwain, Chemical Exploration of the Brain (T. Chojnacki)	R17
Biochemical Problems of Lipids; A. C. Frazer, ed. (T. Korzybski)	R18
B. Holmstedt and G. Liljestrand, Readings in Pharmacology (W. Mo- zolowski)	R18
A. Furst, Chemistry of Chelation in Cancer (M. Zydowo)	R19

Available From PL 480

OTS 64-11406/4

CONTENTS

Barbara Bulhak and Irena Chmielewska, Utilization of infused protein hydrolysate by human subjects. VI. The constituents of non-ampholytic fraction of hydrolysate . . . . .	261
P. Dworsky and O. Hoffmann-Ostenhof, 1,3-Aldonic acid dehydrogenase from <i>Schwannomyces occidentalis</i> . . . . .	266
J. Kiebler and Barbara Biczowa, The five-membered disulphide ring system. III. Antineoplastic potentialities . . . . .	279
N. B. Myant and Jill Iliffe, On the possible role of tricarboxylic acids in the control of fatty acid synthesis . . . . .	293
J. Krawczyński, K. Grajner, Jolanta Raczyńska, Irena Drewnowska, Elżbieta Walażyńska and Krystyna Ilowiecka, Isolation of non-haemoglobin proteins of the red blood cell by the use of Rivanol . . . . .	305
H. von Euler, Thin-layer electrophoresis of blood and serum of various animals . . . . .	311
K. Yagi and S. Yamada, Studies on the administration of riboflavin-5'-monosulphate . . . . .	315
A. Brzezinski and B. Filipowicz, Thiamine and thiamine esters in the guinea pig liver in experimental diphtherial toxemia . . . . .	323
V. Chmelar, I. M. Hais and Milena Hodanova, $\gamma$ -Aminobutyric acid content in rat brain processed under different temperature conditions . . . . .	327
A. F. Richter and Božena Cejková, On the nature of proteolysis by chloroethanol . . . . .	337
T. Chojnacki and J. Porzybski, On the use of $^{32}$ P-labelled cytidine diphosphate bases for the <i>in vitro</i> studies on the methylation of phospholipids with S-adenosylmethionine . . . . .	341
Konstancja Raczyńska-Bojanowska and Ina Gąsiorowska, Studies on the imidazolytic and exchange reactions of NADase from carp liver mitochondria . . . . .	347
H. Theorell and T. Yonetani, The complexes of NADH and NAD with liver alcohol dehydrogenase at pH 10 . . . . .	353
Leokadia Klyszejko and A. Dmochowski, Fractionation of histones from cell nuclei of ox pancreas . . . . .	363
M. Schmidt and A. Dmochowski, The acid mucopolysaccharides of normal and atherosclerotic human aorta . . . . .	371
K. Murawski and K. Zakrzewski, Sulphydryl groups and haem-globin linkage . . . . .	379
I. Huzák and I. Durkó, Formation of indole-pyridoxal complex in the urine of schizophrenics . . . . .	389
Aleksandra Kubicz and Wanda Mejsbaum-Katzenellenbogen, On the use of tannin for the preparation of glycoprotein hormones from hog pituitary gland . . . . .	395
Z. Vourazka, Hana Sipalova and Z. Hrkál, The interaction of the $\alpha$ - and $\beta$ -chains of human globin with zinc ions . . . . .	403
Irena Kąkol, J. Gruda and S. Bitny-Szlachto, A study on the role of SH groups of myosin by means of $\beta$ -hydroxyethyl-2,4-dinitrophenyl disulphide . . . . .	411
W. Drabikowski and S. Bitny-Szlachto, Studies on sulphydryl groups of actin . . . . .	421
Stella Niemierko and W. Niemierko, Behaviour of some phosphorus compounds and carbohydrates in the wax moth during anoxia and postanoxia recovery . . . . .	429
Books reviewed . . . . .	R5

Available From PL 480  
OTS 64-11406/2-3

# ACTA BIOCHIMICA POLONICA

Vol XI, No 2, 3, 1964

## CONTENTS (Contd)

S. Ludewig and A. Chanutin, Effect of salts and pH on the organic and inorganic phosphates in human red cell haemolysate . . . . .	85
J. Kawiak, Arylsulphatase C activity in rat cartilage . . . . .	91
K. Ostrowski, Z. Darżynkiewicz, W. Sawicki and Zofia Stocks, Dry mass of epithelial cells from the vagina of mice in the course of the oestrus cycle measured by interference microscope . . . . .	99
J. Horejší and Libuse Mirceva, A contribution to the study of glutathione synthesis by the human erythrocyte . . . . .	107
Zofia Porembka and Irena Mochnacka, The ornithine cycle in <i>Celerio euphorbiae</i> . . . . .	113
Janina Dżużyńska, Krystyna Krajewska and J. Gill, Serum glycoproteins in some species of non-domesticated mammals . . . . .	121
Janina Dżużyńska and Krystyna Krajewska, Serum glycoproteins in some species of birds . . . . .	129
Maria M. Jeżewska, B. Gorzkowski and J. Heller, Utilization of [1- <sup>14</sup> C]glycine in purine biosynthesis in <i>Helix pomatia</i> . . . . .	135
Helena Zalewska and R. Pakuts, Biological effects of renaturation of mixtures of genetically different DNA's of <i>Bacillus subtilis</i> . . . . .	139
Janina Opińska-Blauth, M. Chareziński and H. Berbec, Tryptophan in erythrocytes and plasma of man and some animals . . . . .	147
Mirosława Weber, Annie Rossion, M. R. Rivière, R. Vendrely and Colette Vendrely, Incorporation of <sup>32</sup> P into nucleic acids and phospholipids of the livers of tumour-bearing rats . . . . .	153
P. Szafranski, S. Perzyński and Barbara Krasicka, Decomposition of ribonucleic acid from the liver microsomal fraction . . . . .	159
M. Zydowo and Jadwiga Purzycka, Comparative studies on glutamine content in animal tissues . . . . .	165
Margaret E. Gregory and S. K. Kon, The forms of phosphorylated thiamine in the milks of different animals . . . . .	169
Irena Pietrzykowska and D. Shugar, Thermal reactivation of ultraviolet inactivated bacteriophages . . . . .	179
Krystyna Belicka, Teresa Laskowska and Irena Mochnacka, Hydroxylation of phenylalanine in insects and some vertebrates . . . . .	191
W. Bicz and Barbara Broniszewska-Ardelt, The effect of 2-deoxy-D-glucose on aerobic and anaerobic glycolysis in neoplastic cells and tissues . . . . .	197
Maria Gumlińska and Zofia Porwit-Bóbr, Metabolism of phosphorus compounds in mouse embryo cells grown <i>in vitro</i> and infected with SE polyoma virus . . . . .	203
A. Koj and J. Frendo, Studies on sulphaemoglobin formation . . . . .	211
Maria Sarnecka-Keller, Jadwiga Noworytko and Stanisława Kos, Isolation and preliminary fractionation of urinary peptides by means of gel filtration . . . . .	221
Z. Szafran and Halina Szafran, Arylsulphatase from pig intestinal mucosa . . . . .	227
T. W. Szczepkowski, T. Zebro and J. Stachura, Radioprotective properties of cysteinethiosulphonate . . . . .	235
Z. Walczak and Wl. Ostrowski, Nucleolytic enzymes of <i>Thiobacillus thioparus</i> . II. Ribonucleases and their properties . . . . .	241
J. M. Zgliczyński and Teresa Stelmachowska, The effect of metabolic products of cystine on the activity of glyceraldehyde-3-phosphate dehydrogenase . . . . .	253

(Continued)

Available From PL 480  
OTS 64-11406/2-3

# **ACTA POLONIAE PHARMACEUTICA**

Vol XXI, No 1, 1964

## **CONTENTS (Contd)**

W. Roeske: Pharmaceutical Studies in the History of the Jagiellonian University . . . . .	1
Z. Margasiński, R. Danielak, T. Pomazańska, H. Rafałowska: Separation of Phenothiazine Derivatives by Thin-layer Chromatography. Part I. . . . .	5
J. Derlikowski, A. B. Narbutt-Mering, E. Perkowski, W. Węglowska, J. Potajło-Gulińska: Application of Ionophoresis for the Separation of Multi-component Mixtures of Drugs . . . . .	9
L. Polaczek, A. Grzeszkiewicz: Determination of Sparteine $\beta$ -Camphosulfonate . . . . .	20
W. Rusiecki, M. Henneberg: Identification of Chlorpromazine and its Decomposition Products by Thin-layer chromatography . . . . .	25
A. Piotrowska: New Color Reaction for Chlortetracycline and Oxytetracycline . . . . .	31
H. Siedlanowska: Determination of Dimethylaminoethyl Diphenylhydroxyacetate Hydrochloride and N',N'-Anhydro-bis( $\beta$ -hydroxyethyl)-biguonid Hydrochloride in Tablets . . . . .	35
W. Wiśniewski, E. Klepaczewska-Sałuda: Refractometric Method for Determination of Ethanol in Ethanol-Water-Ether Mixtures and in Valerian Ethereal Tincture . . . . .	43
K. Lenartowicz, W. Zalewski: Semi-micro Determination of Iodine in Catgut . . . . .	49
T. Bodalski, E. Malcher: The Presence and Determination of Rutin in the Leaves of <i>Dictamnus albus</i> L. . . . .	53
T. Bodalski, E. Malcher: Determination of Rutin in Five Species of <i>Ruta</i> . . . . .	58
H. Gertig: Alkaloids of <i>Eschscholtzia californica</i> Cham. Part I. Separation of Alkaloidal Fractions from Roots by Thin-layer Chromatography . . . . .	62
Z. Olszewski, A. Kubis, A. Szyndkielewski: Effect of Stabilization on the Action of Dry Extracts of Walnut Leaves and Sorrel Roots and Rhizomes on Certain Species of Bacteria . . . . .	69
S. Deptuła, A. Robel: The Chemical Determination in Medicaments of Some Oestrogenic, Androgenic and Progestenic Substances . . . . .	76
K. Myszkowska, J. Tautt, S. Tuszyńska, W. Woźniak: Microbiological Determination of d-Panthenol by Means of <i>Leuconostoc Mesenteroides</i> . Evaluation of the Method and its Analytical Merits . . . . .	84
B. Jurecka: The Effect of pH on the Hydrolysis of Bovine Blood Proteins with Pancreatic Enzymes. II. The Composition of a Mixture of Peptides and Free Amino Acids . . . . .	92
B. Kamiński: Modification of the Soxhlet Apparatus for the Extraction of Vegetable Drugs . . . . .	100
A. Szymańska, W. Zalewski, D. Kirkor, W. Chimiak: Studies on Dressing Glues . . . . .	106
<b>SCIENTIFIC COMMUNICATIONS</b>	
H. Bojarska-Dahlig, J. Misterek: Studies in Monoamine Oxidase Inhibitors. V. Hydrazino Derivatives of Benzoic Acid . . . . .	113
A. Swirska: Derivatives of 2-Furaldehyde Substituted at Position 5 as Potential Pharmacologically Active Substances . . . . .	117

Available From OTS 64-11412/1

---

Table of Contents

i

---

An Effective and Active Method of Improving Combat Readiness . . . . .	1
N. Chugunov	

HEROIC FEATS BECKON...

A Memorable Year . . . . .	8
I. Kozhedub	
Maturity. . . . .	15
G. Lobov	
We Attack in the Lower Hemisphere . . . . .	26
A. Alelyukhin	
Covering Dive-Bombers. . . . .	30
V. Popkov	
A Family of Winged Heroes. . . . .	34
Petrus' Brovka	
Pages From a Flight Book . . . . .	37
N. Platonov	
On the Wings of Courage . . . . .	41
G. Yevstigneyev	
Their Combat Helpers. . . . .	51
S. Ivlev	
During Those Flying Days and Non-Flying Days . . . . .	57
A. Kochkurov	

\* \* \*

---

1964

AVIATSIYA I KOSMONAVTIKA

No. 8

AUGUST

---

Monthly Magazine of the Air Force

---

Fighters Attack Ground Targets . . . . .	64
A. Chertkov, A. Bardunis	
First Flights by Trainees. . . . .	77
A. Yakimenko	
Recovering a Heavy High-Speed Aircraft from a Dive . . . . .	84
V. Kovalev, F. Sklyanskiy	
In a Foremost TECh. 1. In Two Shifts . . . . .	92
A. Korzhov	

(Continued)

Available From FTD-ST-64-8

AVIATSIYA I KOSMONAVTIKA

Table of Contents

Earth-Space. The Radio Talk of G. S. Titov . . . . .	98
Orbital Rendezvous . . . . .	106
A. Nikolayev, P. Popovich	
One Communications Session. . . . .	109
V. Petrov, G. Sibiryakov	
Man Works in Space . . . . .	114
Yu. Volynkin	

NEWS FROM ABROAD

Punitive Aircraft. A Review. . . . .	117
N. Listvin	
Side-Looking Radar . . . . .	125
A. Leonov	

Available From FTD-ST-64-8

## Table of Contents

i

The Pilot and Present-day Aircraft.....	1
Editorial	
Exercises Are Not Parades.....	5
Our Pennant on the Moon.....	10
Yu. Nechayev	

### THE INSTRUCTOR TEACHES, INDOCTRINATES, AND LEARNS HIMSELF

The Instructor Pilot as Pedagog .....	15
A. Matveyev	
The Spin in a Jet Trainer Aircraft.....	22
A. Nikolayev, A. Leonov, V. Pogulyayev	
The Fledglings Take to the Air.....	27
P. Baranov	
"Let's Fly in Pair", Says Yevmenenko.....	31
A. Gorbunov	

\* \* \*

Flight Discipline and the Element Commander .....	36
M. Krivoshchapov	
Electronics and Aviation Tactics .....	43
V. Romasevich, V. Barabanov	
A Tactical Rehearsal Is in Session .....	52
V. Semenchikov	
Class Ratings and Combat Readiness .....	57
A. Konyukhov	

**1964**

**No. 9**

AVIATSIYA I KOSMONAVTIKA

**S E P T E M B E R**

### Monthly Magazine of the Air Force

Automation of the Control System in Supersonic Aircraft.....	63
V. Kovalev, F. Sklyanskiy	
The Methodological Council .....	75
F. Polynin	
In a Foremost TECh. 2. On the Eve of and After Periodic Regulation Inspections.....	79
A. Korzhov	
Methods of Instrument Testing. 3. Magnetic Defectoscopy.....	89
S. Luts'ko, G. Shelikhov	

(Continued)

Available FROM FTD-ST-64-9

AVIATSIYA I KOSMONAVTIKA  
No 9, 1964

ii

Table of Contents

---

Man in the State of Weightlessness. Psychophysiological Reactions.....	97
V. Lebedev	

\* \* \*

SUGGESTIONS AND COMMENTS

The Fourth Turn .....	106
A. Astashkevich	
Computing the Wind on the Navigator's Rule .....	109
Ye. Chermnykh	
For Working on the Map in Flight. ....	109
V. Zabaluyev	
Concerning Technician Kuz'min's Defectoscope .....	111

REVIEW AND BIBLIOGRAPHY

There Are Women in Russian Villages .....	113
G. Linnik	

NEWS FROM ABROAD

The Provocational Activities of the U. S. Air Force .....	117
N. Listvin	

Available From FTD-ST-64-9



# Automation and Remote Control

*A translation of Avtomatika i Telemekhanika, a publication of the Academy of Sciences of the USSR*

Vol. 25, No. 11

November, 1964

## CONTENTS

	PAGE	RUSS. PAGE
Approximate Synthesis of Optimal Control. <u>V. F. Krotov</u> . . . . .	1369	1521
Minimization of Continuous Convex Functionals in Linear Systems with Continuous Convex Constraints Imposed on the Phase Coordinates. <u>V. F. Dem'yanov</u> . . . . .	1376	1528
Programming Optimal Processes for Controlling Linear Objects. <u>L. N. Volgin</u> . . . . .	1388	1538
Optimal Control in the Presence of Delay. <u>V. N. Novosel'tsev</u> . . . . .	1395	1545
Control Optimization Based on the Criterion of Maximum Likelihood. III. <u>I. I. Perel'man</u> . . . . .	1398	1549
Control of Linear Systems by Means of Floating-Control Regulators with Variable Structure without using Pure Derivatives in the Control Law. II. <u>V. A. Taran</u> . . . . .	1406	1558
Iterative Method of Selecting Controlling Actions for Bringing a System to a Given State within a Given Time. <u>G. I. Korotkevich</u> and <u>A. E. Ordanovich</u> . . . . .	1413	1566
Homogeneous Games for Automata and Their Computer Simulation. <u>V. I. Bryzgalov</u> , <u>I. M. Gel'fand</u> , <u>I. I. Pyatetskii-Shapiro</u> , and <u>M. L. Tsetlin</u> . . . . .	1419	1572
On the Automation of Digital Computer Design. <u>I. Ya. Landau</u> . . . . .	1428	1581
Refining Estimates for Determining the Number of States During Composition of Finite Automata. <u>M. A. Gavrilov</u> . . . . .	1434	1588
Nonlinear Discrete Correction for Automatic Control Systems with Thyatron Converters. <u>V. G. Kagan</u> . . . . .	1441	1597
The Effect of the Reliability of a Servicing Device on the Functional Indexes of Systems with Limited Flow Requirements. <u>O. I. Bronshtein</u> . . . . .	1446	1603
The Application of Parallel Ring Counters for Sequence Control of Switching Operations as a Function of Cycle Number. <u>A. N. Pivovarov</u> . . . . .	1451	1609
Comparison of the Quantity of Information Obtained for Various Distribution Laws of Measured Variables and Errors. <u>S. M. Mandel'shtam</u> . . . . .	1459	1618
Estimate of the Number of Signals in Codes with Correction of Non-Symmetric Errors. <u>R. R. Varshamov</u> . . . . .	1468	1628
Approximate Determination of Periodic Solutions in Automatic Control Systems Containing Two Non-Linear Feedbacks. <u>P. G. Chistyakov</u> . . . . .	1470	1630
CHRONICLE		
Twenty-fifth Anniversary of the Institute of Automation and Remote Control (Technological Cybernetics). <u>D. M. Berkovich</u> . . . . .	1473	1633

Available From Instrument Society of America

No. 4

July-August

Principal Laws Governing the Distribution of Oil in	
Oil-Bearing Regions . . . . .	1
The Depth of Folded Systems and Deep-Seated Faults . . . . .	25
Geochemical-Mineral-Facies and Other Basic Problems of	
Ancient Sedimentation . . . . .	32
Tectonics of the Northeastern Aral Area . . . . .	61
The Stratigraphy of the Proterozoic and Lower Paleozoic Sediments	
of the Bol'shoi Kuratau . . . . .	84
The Systematics and Phylogeny of the Order Nautilida . . . . .	107
The Lower Volga during Khvalynsk Times . . . . .	126
Breccias in Metamorphic Sequences . . . . .	137
Reports	
The Activities of the Geological Sections of the Moscow Society	
for Natural Research: The Paleontological Section . . . . .	140
Vertebrate Paleontology in China . . . . .	149
Invertebrate Paleontology in China . . . . .	153
The Activity and Trend of Development of the Chinese	
Paleontological Society . . . . .	160
The Development and Achievements of Paleobotany in China . . .	165
New Studies on the Stratigraphy of Permian Sediments in China . .	168
Preliminary Examination of Ornithischia from Laiyang in the	
Shantung Province . . . . .	171

No. 5

September-October

Forty Years of Soviet Geology . . . . .	181
The Problem of the Formation of the Ocean Basins . . . . .	233
Certain Problems Related to the Origin and Classification of the Folds	
of the Earth's Crust . . . . .	251
Some Current Problems of Seismo-Geology . . . . .	282
The Hydrogeological Conditions of Hydrothermal Processes . . . . .	311
Zones of Distribution of Portlandian Sediments in the Moscow Region . . .	330

(Continued)

Available From Israel Program for Scientific Translations

The Development of Sedimentary Petrography in the USSR or The Study of Sedimentary Rocks over 40 Years . . . . .	351
Certain Problems Concerning the Tectonics of the Eastern Part of the Balkan Peninsula and their Connection with the Tectonic Problem of the Black Sea Region . . . . .	360
The Deep Geology of the Kokpekty Anticline in the Mugodzhary Region	372
The Triassic Paleogeography of the Southern Maritime Territory (Primor'e) . . . . .	406
Paleogene Sections of the Kyurendag Type in Turkmenistan . . . . .	431
A New Pliocene Formation in the Eastern Part of the Turgai Depression	445
The History of Formation of the Ground Waters of the Irtysh Artesian Basin and the Adjacent Regions . . . . .	454
Kimmeridgian Sediments in the Moscow Region . . . . .	463
Reports	
The Activities of the Geological Sections of the Moscow Society for Natural Research . . . . .	470
Appendix	
The Mongolia-Okhotsk Geosynclinal Region and its Position in the Structure of Eastern Asia . . . . .	489
The Nature (Theory) of Geological Cyclicity . . . . .	491
The Genetic Types of Petroleum and the Formation of Petroleum Accumulations in Northeastern Sakhalin . . . . .	492
New Data on the Geological Structure of the Leninogorsk Depression in the Rudnyi Altai . . . . .	493
New Data on the Geology of the Northwestern Caucasus (Between the Tuapse and the Lazarevskoe Intersections) . . . . .	494
Certain Problems of the Stratigraphy of the Lower Part of the Lower Carboniferous . . . . .	497
The Localization of Polymetallic Mineralization and Hydrothermal Activity in the Deposits of Zmeinogorsk Ore Field . . . . .	498
Upper Proterozoic Vulcanism in the Northern Part of Central Kazakhstan and Chingiz . . . . .	500
New Data on the Petrography of the Intrusive Massifs of the Southern Part of Central Crimea . . . . .	502
The Cretaceous Vulcanism of Southern Sakhalin . . . . .	503
The Mineralogy of the Lead-Zinc Mineralization in the Karatau Range . . . . .	504
Some Features of the Devonian Acid Effusives in the Region of Zmeinogorsk in the Rudnyi Altai . . . . .	505

(Continued)

Available From Israel Program for Scientific Translations

**BYULLETEN' MOSKOVSKOGO OBSHCHESTVA ISPYATATELEI PRIRODY, OTDEL  
GEOLOGICHESKII**

**Vol XXXII, No 4, 5, 6, 1957**

**Page**

<b>The Main Features of the Vulcanism of the Rudnyi Altai . . . .</b>	<b>506</b>
<b>The Tectonic Conditions of Formation of the Effusives of the Rudnyi Altai . . . . .</b>	<b>507</b>
<b>Trace Elements in the Polymetallic Deposits of the Rudnyi Altai</b>	<b>509</b>
<b>Some Features of the Formation of the Altai Polymetallic Ores .</b>	<b>510</b>
<b>The History of Paleozoic Magmatism in the Rudnyi Altai . . . .</b>	<b>511</b>
<b>An Allite Weathering Crust in the Humid Subtropics of Transcaucasia . . . . .</b>	<b>512</b>
<b>The Accumulation of Phosphorite in the Tertiary Sediments of Sakhalin . . . . .</b>	<b>513</b>
<b>The Problem of the Origin of Fresh Ground Waters in Conditions of Arid Climate . . . . .</b>	<b>515</b>
<b>Some Problems of the Geological History and Classification of Rocks in Engineering Geology . . . . .</b>	<b>516</b>
<b>Forested Swamps of Central Meshchera . . . . .</b>	<b>517</b>
<b>Material on the James Cook Expedition Newly Discovered in the Herbarium of the Moscow State University . . . . .</b>	<b>518</b>
<b>The 18th Century Herbarium at the Moscow University . . . . .</b>	<b>520</b>
<b>The Paleontological Features of the Stratigraphy of the Lower Cretaceous Sediments of Crimea . . . . .</b>	<b>521</b>
<b>The Lower Cretaceous Trigonias from Crimea . . . . .</b>	<b>522</b>
<b>The Determination of Paleotemperatures from the Isotopic Composition of Oxygen in Organic Calcite . . . . .</b>	<b>524</b>
<b>The Kazanian Sea of the Russian Platform and Its Fauna . . . .</b>	<b>525</b>

**Available From Israel Program for Scientific Translations**

# DOKLADY BIOCHEMISTRY

PROCEEDINGS of the  
ACADEMY OF SCIENCES  
of the USSR

A translation of DOKLADY AKADEMII NAUK SSSR

A publication of the Academy of Sciences of the USSR

© 1965 CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N.Y.

Volumes 154-156

January-June, 1964

## CONTENTS

	PAGE	RUSS. ISSUE	RUSS. PAGE
<u>VOL. 154</u>			
Nucleotide Composition of the Rapidly Labeled RNA Fraction of the Silk Gland of the Silkworm <i>Bombyx mori</i> L. - A. S. Antonov, S. P. Grigor'eva, P. V. Ivanova, and A. N. Belozerskii	1	1	216
Enzymatic Synthesis of Glucosamine in the Liver under Conditions of Hyperoxia - Z. G. Bronovitskaya, Z. S. Gershenovich, and N. Pisarenko	4	1	220
Effect of Iron(II) Gallate on the Kinetic Constants of the Reaction of Enzymatic Reduction of Sodium Pyruvate - I. S. Vartanyan, E. M. Goukberg, and N. M. Emanuel	7	1	223
Biosynthesis of Valine and Isoleucine from their Keto and Dihydroxy Analogs in Flowering Parasitic Plants - Z. S. Kagan, G. Choshner, and V. L. Kretovich	10	2	
Formation of Coservates from Polypeptides and Polynucleotides - A. I. Oparin, K. B. Serebrovskaya, N. V. Vasil'eva, and T. O. Balaevskaya	14	2	471
Effect of Enzyme Induction of Starving of Cells - V. V. Yurkesko	15	2	473
Synthesis of Nuclear RNA during Early Embryonic Development - K. A. Kafiani and M. Ya. Timofeeva	19	3	721
Flavonoids of <i>Bupleurum multinerve</i> D. C. - V. G. Minaeva and T. A. Volkonskaya	23	4	936
Effect of Cycloserine on the Biosynthesis of Glucosamine and Streptomycin - V. A. Severina, S. V. Gorskaya, and I. V. Gracheva	27	4	960
Determination of Protein on the Basis of the Catalytic Action of Copper in the Biuret Complex - B. A. Taimud, Yu. N. Il'ina, and P. V. Afanas'ev	30	4	963
Efficiency of Oxidative Phosphorylation in Plant Mitochondria - V. Ya. Kalacheva and N. M. Sisakyan	33	5	1198
Participation of Mitochondria in Regulation of Glycolysis in the Cell Nucleus - S. A. Neifakh, V. L. Nemchinskaya, V. S. Gaitshokov, and L. Sh. Ganelina	36	5	1202
Synthesis of Proteins of Organs in Presence of a Locus of Active Growth in the Organism - A. V. Pogosova, E. A. Rapoport, and V. P. Zelenina	38	5	1206
Effect of X-Irradiation on the Coenzyme A Content of the Bone Marrow of Rats - V. N. Filippova and I. F. Seitz	42	5	1210
Changes in Dimensions of Macromolecules due to Abolition of Tertiary Structure during the Process of Cleavage of Disulfide Bonds - G. V. Samonov, R. B. Ponomareva, and L. P. Shandakova	45	5	1213

(Continued)

Available From Consultants Bureau

## CONTENTS (Contd)

	PAGE	RUSS. ISSUE	RUSS. PAGE
VOL. 155			
Mechanism of RNA Synthesis in Extracts of <i>Nicotiana glutinosa</i> Leaves Infected with Tobacco Mosaic Virus - I. G. Balandin, É. B. Khoroshutina, and V. S. Tongur . . . . .	49	1	201
Uptake of Orthophosphate from the Medium by <i>Penicillium chrysogenum</i> Mycelia - I. S. Kulaev . . . . .	52	1	204
Phosphatidic Acid Phosphatase of Chick-Brain Microsomes during Ontogenesis - L. F. Pomazanskaya . . . . .	56	1	208
Transformation of Coacervate Droplets into Dynamically Stable Systems - K. B. Serebrovskaya and N. V. Vasil'eva . . . . .	59	1	212
Experimental Study of the Antiblastic Activity of Sydnominines - V. A. Chernov and V. G. Yashunskii . . . . .	63	1	216
Critical Phenomena of Transplantable Leucosis - N. M. Émanuéil, L. M. Dronova, A. G. Gagarina, and N. P. Kononova . . . . .	67	1	220
Effect of D <sub>2</sub> O on the Physical Properties of Wheat Gluten - V. L. Kretovich and A. B. Vakar . . . . .	71	2	465
Specificity in Biosynthesis of Silk Fibroin - Yu. B. Filippovich and N. N. Belyaeva . . . . .	73	2	468
Effect of a Factor Damaging Chromosomal DNA on Development of Compensatory Cardiac Hypertrophy - A. G. Bazardzhyan, E. M. Leikina, and K. K. Antipova . . . . .	75	3	685
Characteristics of R-RNA and D-RNA of the Chromosomal-Nucleolar Apparatus of Animal Cells - G. P. Georgiev, O. P. Samarina, and M. N. Smirnov . . . . .	78	3	688
Abiogenic Formation of Porphin and its Participation in Processes of Photochemical Electron Transport - A. A. Krasnovskii and A. V. Umrikhina . . . . .	81	3	691
Acid Phosphatase of the Roots of Some <i>Eremurus</i> Species - A. A. Kuznetsov and B. N. Stepanenko . . . . .	84	3	694
Role of DNA-Dependent RNA Synthesis in Activation of the Genetic Apparatus of Differentiated Cells during Increase in their Physiological Function - F. Z. Meerson, N. S. Kalebina, G. A. Malov, N. T. Simonyan, and L. K. Romanova . . . . .	87	3	698
Effect of Conditions of Cultivation on Wheat Gluten - A. K. Él-Miligi, A. B. Vakar, and V. L. Kretovich . . . . .	91	3	702
Changes in Amino Acid Composition of Total Protein of <i>Bacillus subtilis</i> T <sup>-</sup> Grown in a Medium Containing the Thymine Analog 5-Bromouracil - A. S. Antonov, N. Lyutskanov, and A. N. Belozerskii . . . . .	94	4	944
Peculiarities of Glucose Utilization by Ascites Carcinoma Cells in Vivo - E. G. Gorozhanskaya and V. S. Shapot . . . . .	97	4	947
Nature of the Ribonucleic Acid of Nucleoli and "Residual Chromosomes" - M. I. Lerman . . . . .	100	4	950
Effect of Fatty Acids on the Structure of the Trypsin Molecule - V. V. Mosolov . . . . .	103	4	953
RNA Synthesis in the Silk Gland of the Mulberry Silkworm - V. N. Smirnov, A. S. Spirin, P. Kuliyev, and I. B. Zbarskii . . . . .	106	4	957
Optical Rotatory Dispersion of Complexes of Pyridoxylidene Amino Acids with Ions of Metals - Yu. M. Torchinskii and L. G. Koreneva . . . . .	110	4	961
Changes in the Amino Acid Composition of Silk Fibroin of <i>Bombyx mori</i> Induced by Analogs of the Nitrogenous Bases of DNA and RNA - A. S. Antonov, N. F. Laikova, P. V. Ivanova, S. P. Grigor'eva, and A. N. Belozerskii . . . . .	113	5	1201
Nature of the Thermal After-Effect in Solutions of Trypsin Exposed to X-Irradiation - V. N. Luzikov and E. B. Burlakova . . . . .	117	5	1205
Effect of Compounds of Arsenic on Sensitivity to Radiation of Nervous Tissue - P. F. Minaev, O. F. Logvinova, A. P. Mironova, and A. I. Chukhrova . . . . .	120	5	1209

(Continued)

Available From Consultants Bureau

DOKLADY AKADEMII NAUK SSSR  
BIOCHEMISTRY  
Vol CLIV-CLVI, Jan-Jun, No 1-6, 1964

CONTENTS (Contd)	PAGE	RUSS. ISSUE	RUSS. PAGE
Role of Carotenoids in the Mechanism of Transfer of Oxygen in Photosynthesis - V. S. Saakov . . . . .	123	5	1212
Study of Protein-Bound Carbohydrates of the Wall of the Aorta in Atherosclerosis - Yu. E. Berezov, R. V. Merkur'eva, and D. G. Grigoryan . . . . .	127	6	1444
Effect of Watering on the Catechin Content of Tea Plants - K. M. Dzhemukhadze and F. G. Nakhmedov . . . . .	130	6	1447
Effect on Enzymatic and Optical Activity of Lysozyme of Irradiation with Electrons and Protons - N. A. Kravchenko, V. P. Zrel'ov, and E. I. Klabunovskii . . . . .	132	6	1449
Effect of Bivalent Cations on Displacement of Electrochemical Equilibrium in DNA Solutions - A. G. Pasynskii and R. S. Chernyak . . . . .	135	6	1452
State of the Ammonia-Glutamic Acid-Glutamine System in Rat Brain during Development of Sarcoma M-1 - A. V. Rogoznaya . . . . .	138	6	1455
Study of the Kinetics of Hydrolysis of the Phosphoamide Bond of Adenylyl-(5' → N)- Phenylalanine - E. P. Savel'ev, T. S. Ryabova, I. P. Beletskaya, and Z. A. Shabarova . . . . .	140	6	1457
Effect of Phosphates on the Yield of Essential Oil - Yu. F. Chirikov . . . . .	143	6	1460
 VOL. 156			
Subunits of Cytoplasmic Membranes of <i>Micrococcus lysodeikticus</i> - V. I. Biryuzova, M. A. Lukoyanova, N. S. Gel'man, and A. I. Oparin . . . . .	147	1	198
Incorporation of C <sup>14</sup> -β-Mercaptopropylamine into Proteins of Isolated Microsomes, Nuclei, and Mitochondria of Mouse Liver - E. F. Romantsev and G. V. Kalistratov . . . . .	150	1	200
Effect of Hydrogen Peroxide on Reduction of Nitrates in Green Plants - A. A. Gurevich, I. N. Trubachev, and M. S. Rerberg . . . . .	153	2	457
Globulins of Sunflower Seeds ( <i>Helianthus annuus</i> L.) - V. G. Klimenko and N. I. D'yachenko . . . . .	156	2	461
Preparation of Crystalline Histidine Decarboxylase of <i>Micrococcus</i> sp. n. - S. R. Mardashev and L. A. Semina . . . . .	159	2	465
Biosynthesis of Amino Acids from Glyoxylic Acid in Oil-Seed Plants - E. A. Morgunova, Z. G. Evstigneeva, and V. L. Kretovich . . . . .	162	2	467
Direct Evidence of Participation of Phosphoglyceric Acid in the Reductive Photosynthetic Carbon Cycle - N. G. Doman, R. Ya. Shkol'nik, and Z. A. Terent'eva . . . . .	165	3	698
Effect of Light on Oxidation of Succinate by Mitochondria of Green and Etiolated Peas - I. M. Mosolova and N. M. Sisakyan . . . . .	169	3	702
Molecular State of the DNA of Bacteriophage T2 during its Intracellular Development - S. E. Bresler, L. E. Drabkina, M. I. Mosevitskii, and A. L. Timkovskii . . . . .	172	4	947
Study of Thermal Denaturation of DNA with the Aid of an Adiabatic Microcalorimeter - P. L. Privalov, K. A. Kafiani, and D. R. Monaselidze . . . . .	175	4	951
Deltoin - A New Natural Furocoumarin - G. K. Nikonov . . . . .	178	5	1210
Effect of Adrenalin Injection on the Nucleic Acid Content of Nerve and Glia Cells of Sympathetic Ganglia - L. Z. Pevzner . . . . .	181	5	1213
L-Rhamnosidase of Animal Tissues - E. L. Rozenfel'd and G. Ya. Vidershain . . . . .	183	5	1215
Presence in the Cytoplasm of Animal Cells of RNA of Nucleotide Composition Resembling that of DNA - O. P. Samarina . . . . .	185	5	1217
Participation of Ribosomes in the Biosynthesis of Silk Fibron - V. N. Smirnov, P. Kullyev, Ya. M. Varsnavskii, and A. S. Spirin . . . . .	189	5	1221

(Continued)

Available From Consultants Bureau

DOKLADY AKADEMII NAUK SSSR  
BIOCHEMISTRY  
Vol CLIV-CLVI, Jan-Jun, No 1-6, 1964

CONTENTS (Contd)	PAGE	RUSS. ISSUE	RUSS. PAGE
Chemical and Physicochemical Characteristics of Some Hemoglobins - L. P. Alekseenko and V. N. Orekhovich. . . . .	193	6	1455
Investigation of Components of Essential Oils. Mutual Proportions of Thujone Stereoisomers in Artemisia Essential Oils - M. I. Goryaev and Zh. K. Gimaddinov. . . . .	197	6	1459
Assimilation of Ammonia by the Mycotrophic Plant <u>Monotropa hypopitys</u> L. - Z. G. Evstigneeva, K. B. Aseeva, and V. L. Kretovich. . . . .	199	6	1461
Some Properties of the Ribitol-Teichoic Acid of <u>Actinomyces violaceus</u> - I. B. Naumova and M. Sh. Zaretskaya. . . . .	202	6	1464

Available From Consultants Bureau



# DOKLADY BIOPHYSICS

PROCEEDINGS of the  
ACADEMY OF SCIENCES  
of the USSR

*A translation of DOKLADY AKADEMII NAUK SSSR*

*A publication of the Academy of Sciences of the USSR*

© 1965 CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N. Y.

Volumes 154-156

January-June, 1964

## CONTENTS

	PAGE	RUSS. ISSUE	RUSS. PAGE
<b>VOLUME 154, 1964</b>			
Relationship Between Yield of Back Biochemical Mutations in Yeasts and Their Ploidy After Exposure to Different Kinds of Radiation—I. P. Arman and S. N. Ardashnikov	1	1	212
Effect of Water Radiolysis Products on the Viability and Variation of Spores —S. Yu. Gol'dat . . . . .	5	2	457
Long-Wave Forms of Chlorophyll in Photosynthetic Organisms and Aggregated Structures —F. F. Litvin, V. A. Sineshchekov, and A. A. Krasnovskii. . . . .	8	2	460
The Role of Intracorne Light Filters (Mechanism of Color Vision of Lizard and Tortoise) —O. Yu. Orlov and E. M. Maksimova. . . . .	11	2	463
A Comparison of the Oxidation Potentials of Illuminated Chlorophyll and Bacterial Pigments—B. V. Evstigneev and V. A. Gavrilova . . . . .	15	3	714
Free Radical States of Some Antibiotics—Yu. P. Kozlov, A. Kh. Tambiev, and G. A. Taranenko. . . . .	19	3	718
Photoreduction of Chlorophyll a, Bacterioviridin, Bacteriochlorophyll, and Protochloro- phyll in Nonpolar Solvents—V. B. Evstigneev and O. D. Bekasova . . . . .	22	4	946
Duration of Fluorescence of Chlorophyll at Various Concentrations in the Absorbed State and in the Green Leaf—G. G. Komissarov, L. I. Nekrasov, and N. I. Kobozev	26	4	950
Effect of Denervation on the Luminescent Properties of Muscles—I. G. Shtrankenfel'd. . .	29	4	953
Sequence of Free-Radical Reactions During Mechanical Treatment of Protein Molecules —G. V. Abagyan and P. Yu. Butyagin. . . . .	32	6	1444
<b>VOLUME 155, 1964</b>			
Features of the Luminescence of Amylase in the Crystalline State—V. P. Bobrovich and S. V. Konev. . . . .	37	1	197
The Course of Radiation Sickness in Mice Treated with Bone Marrow and Immunization —O. P. Lebedeva and N. A. Maksimovich. . . . .	40	2	454
The Stability of Functionally Different Regions of DNA to Ionizing Radiation —G. E. Fradkin. . . . .	44	2	457
The Ultraviolet Luminescence of Muscles in Various Functional States—I. G. Shtrankenfel'd	47	2	461

(Continued)

Available From Consultants Bureau

DOKLADY AKADEMII NAUK SSSR  
BIOPHYSICS  
Vol CLIV-CLVI, No 1-6, Jan-Jun 1964

CONTENTS (Contd)

	PAGE	RUSS. ISSUE	RUSS. PAGE
Mechanism of Reduction of DNA Level in Tissues After Exposure of Organism to Ionizing Radiation—I. I. Ivanov, O. N. Borovikova, V. G. Vladimirov, V. B. Dolgo-Saburo, and V. I. Sharobaiko . . . . .	50	3	683
Protective Effect of Acridine Orange in the Case of Ultraviolet Irradiation of Infectious DNA of Bacteriophage 1 <sub>φ</sub> -7—G. B. Zavil'gel'skii, B. N. Il'yashenko, É. E. Minyat, and O. N. Rudchenko . . . . .	52	4	937
The Mechanism of the Accelerated Development of Radiation Cataracts Provoked by Puncture of the Irradiated Lens—V. V. Popov, V. A. Golichenkov, A. I. Farberov, and Z. A. Sokolova . . . . .	55	4	940
Effect of a Single Whole-Body Gamma-Irradiation on Macrophages—A. I. Braude. . . . .	59	5	1188
An Unusual Alteration of the Cross-Striated Structure of Myofibrils with Shortening of the Anisotropic Disks—N. A. Gabelova, K. S. Aleinikova, and G. M. Frank . . . . .	63	5	1192
The Photosensitizing Ability of Adsorbed Carotene—G. G. Komissarov, V. A. Gavrilova, L. I. Nekrasov, N. I. Kobozev, and V. B. Evstigneev. . . . .	65	5	1194
Interaction of Biogenic Amines in the Mechanism of the Radioprotective Effect of Histamine—S. Ya. Rapoport, E. I. Krichevskaya, and S. R. Zubkova. . . . .	68	5	1198
An Investigation of Complexes of Nucleic Acids with Acridine Orange by the Rotatory Dispersion Method—V. I. Permogorov, Yu. S. Lazurkin, and S. Z. Shmurak. . . . .	71	6	1440
VOLUME 156, 1964			
Role of Histamine and Serotonin in Radiation-Induced Changes in the Excitability of the Vagal Center—M. M. Gromakovskaya . . . . .	75	1	187
The Possibility of an Indirect Effect of Ionizing Radiation in Lipid Solutions. Radiolysis of $\beta$ -Carotene in Oleic Acid—Yu. B. Kudryashov, Z. Baltbarzdys, and Le Dak L'eu . . . . .	79	1	191
Mortality of Rat Embryos (F <sub>1</sub> ) After Low-Dose X-Irradiation of Gametes of Parents (P) in Different Periods of Their Ontogenesis—E. A. Pozhidaev . . . . .	82	1	194
The Structural Temperature of Living Tissues—N. A. Mal'tsev. . . . .	86	3	695
Change in Submicroscopic Structure of Bone-Marrow Cells in Early Periods of Radiation Disease Caused by Radioactive Strontium—O. A. Khomutovskii . . . . .	88	4	945
Role of Radiotoxins in the Disturbance of Morphogenesis in Irradiated Plants—L. M. Kryukova and A. Kasymov. . . . .	91	5	1204
Changes in Nucleic Acid Content Following X-Irradiation, Suppression and Restoration of the Regenerative Power of Axolotl Limbs—N. A. Teplitz . . . . .	94	5	1207
Relationship Between State of Chlorophyll and Electron Paramagnetic Resonance Spectra of Plant Leaves—G. T. Rikhireva, A. A. Krasnovskii, and L. P. Kayushin. . . . .	97	6	1451

Available From Consultants Bureau

# DOKLADY of the ACADEMY of SCIENCES of the U.S.S.R.

## (DOKLADY AKADEMII NAUK SSSR)

### EARTH SCIENCE SECTIONS

Vol. 152

(Russian original dated September-October, 1963)

April 1965

#### CONTENTS

Page

##### GEOPHYSICS

RECONCILIATION OF THE AVAILABLE EXPERIMENTAL DATA CONCERNING THE SPECTRUM AND ASYMMETRY OF LOCALLY ISOTROPIC TURBULENCE, by R. W. Stewart. ....	1
INCORPORATION OF RADIATION DATA FROM SATELLITES IN A NONADIABATIC MODEL OF ATMOSPHERIC MOVEMENTS, by M. Ye. Shvets and B. Ye. Shneyerov ....	3

##### GEOLOGY

PERMIAN EVAPORITE DEPOSITS OF THE DNIEPER-DONETS TROUGH, by V. K. Gavriash ...	6
PROCESSES OF PLANATION OF THE DEEP OCEAN FLOOR, by A. V. Il'in. ....	9
STRATIGRAPHY OF THE CONTINENTAL CRETACEOUS DEPOSITS OF THE LOWER SYR-DAR'YA UPLIFT (NORTHEAST ARAL REGION, by N. A. Bolkhovitin, L. Z. Kotova, V. I. Samodurov and Yang Chi-tuan. ....	12
REDEPOSITION OF DISSEMINATED SULFIDES DURING THE FORMATION OF COPPER-NICKEL SULFIDE DEPOSITS, by N. A. Kornilov. ....	15
GRAVITY FIELD AND THE ICE-COVERED TOPOGRAPHY OF CENTRAL EASTERN ANTARCTICA, by G. Ye. Lazarev and S. A. Ushakov. ....	18
DIATREMES ON THE RUSSIAN PLATFORM, by V. O. Ruzhitskiy. ....	21
KARAMALYTASH SUITE AND ITS STRATIGRAPHIC POSITION OF THE EAST SIDE OF THE SOUTHERN URALS, by S. M. Andronov. ....	23
NEW DATA ON THE STRATIGRAPHY OF THE JURASSIC OF THE WESTERN UPPER AMUR REGION, by G. I. Bilicheva and E. A. Portnyagin. ....	26
AGE OF THE FOLDED BASEMENT OF THE OLENEK UPLIFT ON THE SIBERIAN PLATFORM, by V. A. Vinogradov and A. A. Krasil'shchikov. ....	28
EARLY SINIAN VOLCANIC TO SEDIMENTARY DEPOSITS OF THE SOUTHEASTERN ALDAN SHIELD (UCHUR RIVER BASIN), by Yu. N. Gamaleya, V. Ye. Zabrodin and V. S. Kogen. ....	30
AGE OF THE BORGOY BEDS IN WESTERN TRANSBAIKAL, by Yu. V. Komarov and A. L. Kiselev. ....	32
SOME EVOLUTIONARY PATTERNS OF NEOTECTONIC MOVEMENTS IN CENTRAL ASIA AND ADJACENT REGIONS, by K. V. Kurdyukov. ....	34
STRATIGRAPHIC SIGNIFICANCE AND COMPOSITION OF THE MOLLUSK FAUNA FOUND IN THE MAYKOP SERIES OF THE TSRAUDON R. (NORTH OSSETIA), by V. D. Somov and L. A. Korobkov. ....	37
NEW INFORMATION ABOUT THE INTRACONTINENTAL QUATERNARY VOLCANOES OF NORTHEASTERN ASIA, by M. D. Chasovitin. ....	39
MIDDLE CARBONIFEROUS CONTINENTAL DEPOSITS OF THE SOUTHERN SLOPE OF THE MAIN RANGE OF THE CAUCASUS, by A. A. Belov and Ye. F. Zaleskaya-Chirkova. ....	41
TECTONIC FACIES OF FLYSCHOIDS AND THEIR ORIGIN IN SOUTHWESTERN ALTAI, by N. L. Bublichenko and M. N. Kozemyako. ....	44
RESULTS OF A PALYNOLOGIC ANALYSIS OF QUATERNARY AND UPPER PLIOCENE DEPOSITS NEAR ZEL'MA VILLAGE, ASTRAKHAN OBLAST', by V. A. Vronskiy. ....	46
CHARACTERISTICS OF THE VEGETATION DURING THE KAZANTSEVAN INTERGLACIAL IN SIBERIA, by R. Ye. Gikerman, L. V. Golubeva, Ye. D. Zaklinskaya, Ye. V. Koreneva, and O. V. Matveyeva. ....	48
THE TIME RELATIONSHIPS OF THE GLACIAL STAGES AND INTERGLACIALS OF THE LAST GLACIATION (BASED ON C <sup>14</sup> DATA), by V. A. Zubakov. ....	52

(Continued)

Available From American Geological Institute

DOKLADY AKADEMII NAUK SSSR  
EARTH SCIENCE SECTIONS  
Vol. CLVII, Sep-Oct, 1963

	Page
PRECAMBRIAN GRANITE AND THE LOWER PALEOZOIC OF CENTRAL TIEN SHAN, by Ye. I. Zubitsov and Ye. I. Zubitsova. . . . .	55
NEW PALYNOLOGIC DATA ON THE DEVELOPMENT OF VEGETATION IN NORTHEASTERN USSR DURING THE QUATERNARY, by A. V. Lozhkin. . . . .	58
PRECAMBRIAN CONGLOMERATES OF THE KOLA PENINSULA, by O. I. Luneva. . . . .	61
THE NUMBER OF ANCIENT GLACIATIONS IN THE KIRGIZ AND KUNGEY ALA-TAU, by Ye. V. Maksimov and V. N. Okhronikov. . . . .	64
PERM' ARCH OF THE SEDIMENTARY MANTLE IN THE EASTERN RUSSIAN PLATFORM, by M. F. Mirchink, R. O. Khachatryan, and V. I. Gromeka. . . . .	67
DISCOVERY OF EIFFELIAN FAUNA AND THE GENERAL FEATURES OF DEVONIAN DEVELOPMENT OF THE WESTERN AND EASTERN SLOPES OF THE SOUTHERN URALS, by A. D. Petrovskiy. . . . .	70
DEPTH OF THE MAGMATIC CHAMBER UNDER AVACHA VOLCANO, by G. S. Shteynberg and M. I. Zubin. . . . .	73
RELATIONSHIP OF THE CRETACEOUS AND PALEOGENE ROCKS OF THE AZOV SEA REGION, by L. A. Yurovskiy. . . . .	76
VERIFICATION OF RIPIHEAN INTRUSION IN SANGILEN (TUVA), by Ye. N. Altukhov. . . . .	78
NEOTECTONIC NATURE OF ABNORMALLY HIGH ROCK PRESSURES IN OIL AND GAS DEPOSITS OF ALPINE GEOSYNCLINAL REGIONS, by K. A. Anikiyev. . . . .	80
FORMATION OF LOCAL STRUCTURES AS A RESULT OF PULSATIONS OF REGIONAL TECTONIC STRESSES, by V. P. Bukhartsev. . . . .	83
HISTORY OF THE FORMATION OF THE UFA AMPHITHEATER IN THE CENTRAL URALS, by M. A. Kamaletdinov. . . . .	86
MORPHOLOGY OF STRUCTURES OF THE EASTERN MARGIN OF THE YENISEY RIDGE, by K. A. Klitin, I. P. Paley, and Ye. S. Postel'nikov. . . . .	88
TECTONIC ZONING OF THE CENTRAL AND SOUTHERN URALS, by K. P. Plyusnin. . . . .	92
PALEOGENIC CHARACTERISTICS OF THE CONTINENTAL MESOZOIC DEPOSITS IN THE ZYRYANKA-SILYAP COAL-BEARING REGION (LEFT BANK OF THE KOLYMA RIVER), by V. A. Samylina. . . . .	95
DEEP STRUCTURE OF THE KOROSTEN' PLUTON BASED ON SEISMIC DATA, by V. E. Sollogub, A. V. Chekunov, L. T. Kalyuzhnaya and L. A. Khilinskiy. . . . .	97
RECENT TECTONIC MOVEMENTS ON THE WESTERN SLOPE OF THE CENTRAL URALS, by I. S. Stepanov. . . . .	100
NEW DATA ON THE STRATIGRAPHY OF THE PALEOGENE OF THE NORTHERN ARAL REGION, by V. A. Bronevoy, O. N. Zhezhelev, and S. G. Zhilin. . . . .	103
GEOLOGIC STRUCTURE OF THE CRYSTALLINE BASEMENT OF THE VYATKA-KAMA INTERFLUVE, by R. N. Valeyev and B. S. Sitdikov. . . . .	106
PLIOCENE DEPOSITS OF THE KURILE ISLANDS, by G. P. Vergunov and A. F. Pryalukhina. . . . .	109
EARLY CARBONIFEROUS VOLCANISM OF SOUTHERN SIBERIA AND THE MONGOLIAN PEOPLE'S REPUBLIC, by M. I. Grayzer. . . . .	112
STRATIGRAPHIC POSITION OF THE COLCHIDITES BEDS, <u>COLCHIDITES SECURIFORMIS</u> ZONE, V. V. Drushchitsa. . . . .	115
BOUNDARY OF THE KAZANIAN AND TATARIAN DEPOSITS AND THE STRATIGRAPHY OF THE LOWER UST'YA SUITE IN THE NORTHERN RUSSIAN PLATFORM, by N. A. Pakhtusova. . . . .	118
NEW DATA ON THE STRATIGRAPHY OF THE LOWER PALEOZOIC OF THE TURUKHAN REGION, by V. U. Petrakov. . . . .	121
FINDING OF CAMPANIAN <u>INOCERAMUS</u> SPECIES IN CENTRAL KYZYL-KUM, by R. P. Soboleva. . . . .	124
AGE OF THE VOLCANIC ROCKS OF THE WESTERN CISCAUCASUS, by A. N. Shardanov and A. A. Shimanskiy. . . . .	126

HYDROGEOLOGY

MAIN FEATURES OF THE HYDROLOGIC SYSTEM OF THE MESOZOIC DEPOSITS OF THE CISCAUCASUS, by V. N. Kortaenshteyn. . . . .	129
---	-----

MINERALOGY

A CASE OF THE COMPLEX REPLACEMENT OF LOPARITE, by A. D. Kalenov, V. I. Anikayeva and K. P. Sokova. . . . .	132
NATURAL CUBIC CHALCOPYRITE, by I. A. Bud'ko and E. A. Kulagov. . . . .	135
SKOLITIZATION OF GRANITOIDS NEAR THE ARSENIC POLYMETAL VEINS OF GAYNAK-KAN (KARAMAZAR), by V. D. Sazonov. . . . .	138

PETROGRAPHY

QUARTZ-SILLIMANITE FACIES OF ACID LEACHING IN GRANITE-GNEISS COMPLEXES, by S. P. Korikovskiy. . . . .	141
---	-----

(Continued)

Available From American Geological Institute

DOKLADY AKADEMII NAUK SSSR  
EARTH SCIENCE SECTIONS  
Vol CLVII, Sep-Oct, 1963

	Page
A UNIQUE DEPOSIT OF ULTRAPOTASSIC PSEUDOLEUCITE SYENITE, by A. Ya. Zhidkov. . .	144
GENESIS OF ROCKS OF THE SPILITE-KERATOPHYRE ASSOCIATION ON PARAMUSHIR ISLAND (KURILE ISLANDS), by K. F. Sergeyev . . . . .	148
EXPERIMENTAL RESEARCH ON THE CRYSTALLIZATION OF SILICATE MELTS WITH THE COMPOSITION OF BASIC ROCKS, by N. F. Chelishchev, V. A. Kuznetsov and Yu. P. Dikov . . . . .	151
LINEAR PARAGENESIS OF THE MAIN ROCK-FORMING ELEMENTS OF SPILITE- KERATOPHYRE FORMATIONS, by Yu. V. Podol'skiy . . . . .	155
LITHOLOGY	
COMPOSITION OF THE <0.001 mm FRACTION OF THE NONCARBONATE RESIDUE OF CHALKY MARLS OF EASTERN BSSR, by Yu. G. Kopysov . . . . .	159
STRUCTURE AND FACIES DIVISION OF COLLUVIUM OF THE FERGANA BASIN, by V. L. Yeliseyev . . . . .	163
GEOCHEMISTRY	
THE EFFECT OF SELENIUM ON THE ISOMORPHOUS REPLACEMENT OF SULFUR BY TELLURIUM IN SULFIDES, by A. Yu. Malevskiy . . . . .	167
THE PROCESS OF FUSINITIZATION, by L. N. Semasheva and L. S. Sofiyev. . . . .	169
ON THE COMPOSITION OF ARSENIC COMPOUNDS IN THE KERCH ORES, by V. V. Gusev. . .	172
THERMODYNAMIC POTENTIALS OF OPEN SYSTEMS WHOSE ACIDITY AND REDUCTION POTENTIAL ARE DETERMINED BY EXTERNAL CONDITIONS, by D. S. Korzhinskiy . . .	175
ON THE QUESTION OF THE ORIGIN OF CARBON DIOXIDE IN LOWER CRETACEOUS GAS DEPOSITS OF WESTERN CISCAUCASIA, by V. N. Kortsenshteyn . . . . .	178
ON THE EFFECT OF THE ENVIRONMENT OF COAL FORMATION ON THE PROPERTIES OF THE ORGANIC COMPONENTS OF COAL, by L. S. Sofiyev, L. A. Gorlenko and L. N. Semasheva. . . . .	181
EFFECT OF THE CONCENTRATION OF CESIUM IN SOIL ON ITS ABSORPTION BY PLANTS, by A. A. Titlyanova. . . . .	183
BEHAVIOR OF GAS-PETROLEUM SYSTEMS AT GREAT DEPTHS, by T. P. Zhuze, G. N. Yushkevich and G. S. Ushakova. . . . .	184
DIFFUSIONAL TRANSPORT OF SALTS IN THE CLAYS OF THE BAKU ARCHIPELAGO, by N. P. Zatenatskaya. . . . .	188
CARBON DIOXIDE GENERATED BY THE ALTERATION OF PETROLEUM DEPOSITS AND THE DEVELOPMENT OF KARST FEATURES, by M. S. Kaveyev . . . . .	191
THE ACID WAVE OF POSTMAGMATIC SOLUTIONS IN MICA PEGMATITES, by B. M. Shmakin. VARIATION IN THE CONTENT OF FISSION PRODUCTS IN CYSTOSEIRA IN THE BLACK SEA, by V. V. Glazunov, V. P. Parchevskiy and D. G. Fleyahman . . . . .	196
DISTRIBUTION FUNCTIONS OF CONCENTRATIONS OF PHOSPHORUS IN THE GRANITOID OF SWITZERLAND, GUYANA AND EQUATORIAL AFRICA, by A. B. Vistelius . . . . .	199
TRACE ELEMENTS IN THE UPPER CARBONIFEROUS DEPOSITS OF THE DONBAS AND THE NORTHEASTERN PART OF THE DNIEPER-DONETS BASIN, by S. V. Litvin . . . . .	202
PALEONTOLOGY	
THE GROWTH OF OOSPORES IN FOSSIL CHAROPHYTES AND A NEW ORGAN-GENUS, by V. P. Maslov. . . . .	206
THE TERTIARY FLORA OF SVETLOGORSK IN THE KALININGRAD DISTRICT, by P. L. Dorofeyev. . . . .	208

Available From American Geological Institute

# DOKLADY PHYSICAL CHEMISTRY

PROCEEDINGS OF THE  
ACADEMY OF SCIENCES  
OF THE USSR

A translation of **DOKLADY AKADEMII NAUK SSSR**

A publication of the Academy of Sciences of the USSR

© 1965 CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N.Y.

Volume 154, Nos. 1-6

January-February, 1964

## CONTENTS

	PAGE	RUSS. ISSUE	RUSS. PAGE
A Study of the Catalyzed Crystallization of Glass—A. G. Alekseev, V. N. Vertsner, Yu. N. Kondrat'ev, E. V. Podushko, and G. P. Tikhomirov . . . . .	1	1	178
Determination of Polymer Transition Temperatures from the Deformation of Powders—S. A. Arzhakov, S. Z. Zainullin, and B. P. Shirkman . . . . .	5	1	181
Photoconductivity of Photographic Films at a Frequency of $10^{10}$ Hz—É. V. Baranov and I. A. Akimov . . . . .	7	1	184
Decomposition of Hydrocarbons at Low Temperatures Photosensitized by Various Benzene Derivatives—V. G. Vinogradova, B. N. Shelimov, N. V. Fok, and V. V. Voevodskii . . . . .	12	1	188
The Resonance Properties of Electrochemical Autooscillating Systems—V. P. Galushko and B. E. Limin . . . . .	15	1	191
Physicochemical Properties of Molten Zinc and Cadmium Tellurides—V. M. Glazov and S. N. Chizhevskaya . . . . .	17	1	193
The Mechanism of Thermal Transformation of Polyacrylonitrile—I. A. Drabkin, L. D. Rozenshtein, M. A. Geiderikh, and B. É. Davydov . . . . .	20	1	197
The Second Harmonic Phase of a Variable Potential and the Transfer Coefficient of Fast Chemical Reactions—V. G. Levich, B. M. Grafov, and B. I. Khaikin . . . . .	22	1	200
Investigation of the Structure of the Double Layer during Electrochemical Initiation of Methylmethacrylate Polymerization—I. V. Shelepin, A. N. Frumkin, A. I. Fedorova, and S. Ya. Vasina . . . . .	25	1	203
The Rate of Conversion of $\text{CCl}_4$ in Shock Waves at 2000-4000°K—T. V. Roshenova and I. M. Naboko . . . . .	29	2	401
A Glass Electrode Sensitive to the Variation of the Oxidation Potential of the Solution—A. A. Belyustin, A. M. Pisarevskii, M. M. Shul'ts, and B. P. Nikol'skii . . . . .	32	2	404
Infrared Spectra and Structure of Aromatic Carbonium Ions—D. S. Bystrov . . . . .	35	2	407
A Method of Calculating the Integral Absorbed Dose of Gamma Radiation in Macrosystems—B. I. Vainshtein . . . . .	39	2	411
The Properties of a Hydrodynamic Stream Flowing Around Very Small Immobile Obstacles and the Efficiency of Capture of Aerosol Particles—M. V. Velichko and L. V. Radushkevich . . . . .	43	2	415
The Structure and Adsorptive Properties of Zeolite Zh—S. P. Zhdanov, N. N. Buntar', and E. N. Egorova . . . . .	47	2	419

(Continued)

Available From Consultants Bureau

CONTENTS (Contd)	PAGE	RUSS. ISSUE	RUSS. PAGE
Influence of Surface-Active Media on the Principles of the Development of the Process of Gripping of Metals during Friction—M. L. Golego . . . . .	128	4	897
Demonstration by the EPR Method of the Participation of a Capture Electron in Radiochemical Reactions in Frozen Aqueous Solutions—B. G. Ershov, A. K. Pikaev, P. Ya. Glazunov, and Vikt. I. Spitsyn . . . . .	131	4	899
The Oxidation Mechanism of Organic Compounds on Solid Nonmetallic Catalysts—I. I. Ioffe, Z. I. Ezhkova, and A. G. Lyubarskii . . . . .	135	4	903
Unsteady Rate of Combustion of a Powder—O. I. Leipunskii, V. I. Konlesnikov-Svinarev, and V. N. Marshakov . . . . .	138	4	907
On the Mechanism of Radical Formation in the Photoirradiation of Ethanol Solutions of Triphenylamine, Frozen at 77°K—A. K. Piskunov, V. E. Kholmogorov, N. D. Shigorin, N. V. Verein, and G. A. Ozerova . . . .	141	4	910
Nuclear Magnetic Resonance in Polymers with a System of Conjugated Bonds—I. Ya. Slonim, Ya. G. Urman, V. A. Vonsyatskii, B. I. Liogon'kii, and A. A. Berlin . . . . .	5	4	914
The Effect of the Cathode Surface State on the Character of an Electrochemical Reaction—Z. A. Solov'eva and A. T. Vagramyan . . . . .	148	4	918
Photocatalytic Oxidation of Gaseous Isopropanol on ZnO and TiO <sub>2</sub> —V. N. Filimonov . . . . .	151	4	922
Investigation of the Influence of Absorbed Fluorine on the Electron Work Function from Iron—N. A. Shurmovskaya, R. Kh. Burshtein, N. S. Miroyubova, and G. M. Kornacheva . . . . .	155	4	926
Detection of Free Hydroxyl in a Rarefied Hydrogen Flame by the EPR Method—V. P. Balakhnin, Yu. M. Gershenzon, V. N. Knodrat'ev, and A. B. Nalbandyan . . . . .	158	5	1142
An Investigation into the Formation of Semiconducting Films of a Polymer Complex of Tetracyanoethylene on Metals by the Volt-Potential Measurement Method—L. I. Boguslavskii . . . . .	161	5	1145
Paramagnetic Relaxation in Solutions of Vanadyl Salts—G. P. Vishnevskaya and P. G. Tishkov . . . . .	164	5	1149
Radiochemical Reduction of Potassium Ferricyanide in Aqueous Solutions of H <sub>2</sub> SO <sub>4</sub> —A. V. Egunov and P. I. Dolin . . . . .	167	5	1153
Direct Electron Microscope Observation of the Polymerization of Crystalline Monomers—V. A. Kargin, M. Azori, N. A. Platé, and S. I. Banduryan . . . . .	171	5	1157
Radiation Synthesis of Xenon Fluorides—G. K. Lavrovskaya, V. E. Skurat, and V. L. Tal'roze . . . . .	174	5	1160
Measurement of the Capacitance of a Platinum Electrode in Solutions of Sodium Acetate with Additions of Methanol and 1,3-Butadiene—L. A. Mirkind and M. Ya. Fioshin . . . . .	177	5	1163
Radiolysis of Aqueous Ferrous Sulphate Solutions Under the Action of Decimicrosecond Electron Pulses—A. K. Pikaev and P. Ya. Glazunov . . . . .	181	5	1167
On the Electroconductivity of Melts of Binary Nitrite-Nitrate Systems—P. I. Protzenko, A. V. Protzenko, Yu. D. Tret'yakov, and L. N. Venerovskaya .	185	5	1171
Influence of Hydration of Ions on the Bulk Viscosity of Electrolyte Solutions—I. Z. Fisher and A. M. Zaitseva . . . . .	190	5	1175
Anode Corrosion of Lead in Sulfuric Acid—I. I. Astakhov, É. S. Vaisberg, and B. N. Kabanov . . . . .	194	6	1414

(continued)

Available From Consultants Bureau

DOKLADY AKADEMII NAUK SSSR  
PHYSICAL CHEMISTRY  
Vol CLIV, No 1-6, Jan, Feb 1964

CONTENTS (Contd)

	PAGE	RUSS. ISSUE	RUSS. PAGE
The Kinetics of the Hydrolysis of Vinyl Esters with Catalysis by Mercury Ions -L. A. Kiprianova and A. F. Rekasheva . . . . .	51	2	423
The Use of Electron Microscope and X-Ray Analysis Methods in the Study of Crystalline Glass Materials-I. I. Kitaigorodskii, M. D. Beus, and M. V. Artamonova. . . . .	56	2	427
Effects of the Rigidity of Polymer Macromolecules on the Transition Temperatures and Morphology of Crystal Structures-P. V. Kozlov, V. B. Ryzhov, and N. D. Burkhanova . . . . .	60	2	430
A Galvanostatic Study of the Processes of Change in the Charge of Chloro Complexes of Iridium-V. I. Kravtsov and G. M. Petrova . . . . .	64	2	433
Study of the Electroreduction of Oxygen on Smooth Platinum in Acid Solutions by the Method of a Revolving Disc Electrode with a Ring-L. Myuller and L. N. Nekrasov . . . . .	68	2	437
The Mutual Influence of Atomic Groups in Molecules Containing Heavy Atoms and Systems of $\pi$ -Bonds-P. P. Shorygin, V. A. Petukhov, and L. G. Stolyarova Low-Temperature Relaxation Processes in Rubberlike Polymers-G. M. Bartenev and Yu. V. Zelenev. . . . .	72	2	441
76	3	661	
The Theory of the Electrolytic Dissolution of Films from the Surface of an Indifferent Electrode-Kh. Z. Brainina . . . . .	80	3	665
The Mechanism of Formation of Molecular Products During the Radiolysis of Water -V. M. Byakov and B. V. Ershler . . . . .	84	3	669
An Electron Microscope Study of the Catalyzed Crystallization of Glasses in the $\text{Li}_2\text{O}-\text{Al}_2\text{O}_3-\text{SiO}_2$ System-V. N. Vertsner, N. E. Kind, E. M. Milyukov, and G. P. Tikhomirov . . . . .	88	3	673
Mechanism of the Formation of Austenite during Rapid Heating of Carbon Steels -V. N. Gridnev, V. N. Minakov, and V. I. Trefilov . . . . .	91	3	675
Rate of Thermal Decomposition of Saturated Organosilicon Peroxides -A. K. Litkovets and T. I. Yurzhenko . . . . .	95	3	679
Quasidiffusion Surface Waves in Polarography-S. G. Maitanovskii . . . . .	99	3	683
Spin Density Distribution in Metal Ketals Containing Methyl Groups -I. D. Morozova and M. E. Dyatkina. . . . .	103	3	687
The Temperature Dependence of the Kinetic Characteristics of Exothermic Reactions in the Condensed Phase-B. V. Novozhilov. . . . .	107	3	690
A Hydrophobic Hydrogen-Silica Adsorbent with an Si-H Bond (Hydridopolysiloxane Xerogel)-I. B. Slinyakova, G. B. Budkevich, and I. E. Neimark. . . . .	108	3	692
The Effect of the Phase State on the Nature of the Reaction of Tritium Recoil Atoms in Cyclohexane-Benzene Mixtures-E. N. Avdonina and An. N. Nesmeyanov . . . . .	111	4	851
Measurement of the Concentrations of Atomic Oxygen and Hydrogen in a Rarefied Hydrogen Flame by the EPR Method-V. P. Balakhin, Yu. M. Gershenzon, V. N. Kondrat'ev, and A. B. Nalbandyan . . . . .	114	4	883
Photoionization of Phenyl Derivatives of Group 5 Elements-F. I. Vilesov and V. M. Zaitsev. . . . .	117	4	886
The Rheology of Polymers. The Universal Nature of the Temperature Invariant Characteristic of the Viscosity of Polymers in the Condensed State -G. V. Vinogradov, A. Ya. Malkin, N. V. Prozorovskaya, and V. A. Kargin . . . . .	121	4	890
Electric Conductivity and Conjugated Double Bonds in Pyrolyzed Polyvinyl Alcohol-A. Ya. Gel'fman, D. S. Bidnaya, L. V. Sigalova, M. G. Buravleva, and V. S. Koba. . . . .	125	4	894

(continued)



DOKLADY AKADEMII NAUK SSSR  
PHYSICAL CHEMISTRY  
 Vol CLIV, No 1-6, Jan, Feb 1964

CONTENTS (Contd)	PAGE	RUSS. ISSUE	RUSS. PAGE
Adsorption of Mixtures of Vapors and Structure of the Adsorbents—B. P. Zering, V. V. Serpinski, and S. I. Surinova . . . . .	198	6	1417
Thixotropy of Polymers in the Visco-Fluid State—G. V. Vinogradov, A. Ya. Malkin, E. P. Plotnikova, and V. A. Kargin. . . . .	202	6	1421
On the Mechanism and Limits of the Chain Spontaneous Ignition of Hydrogen with Oxyg. in Shock Waves—V. V. Voevodskii and R. I. Soloukhin . . . . .	205	6	1425
Molecular Weight Distribution in the Fractions of a Methylmethacrylate-Styrene Copolymer—A. D. Litmanovich and V. Ya. Shtern. . . . .	210	6	1429
Dependence of the Adsorption of Organic Substances on the Potential on Metals Absorbing Hydrogen—A. N. Frumkin. . . . .	213	6	1432

Available From Consultants Bureau

# DOKLADY PHYSICAL CHEMISTRY

PROCEEDINGS OF THE  
ACADEMY OF SCIENCES  
OF THE USSR

A translation of **DOKLADY AKADEMII NAUK SSSR**  
A publication of the Academy of Sciences of the USSR

© 1965 CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N. Y.

Volume 155, Nos. 1-6

March-April, 1964

## CONTENTS

	PAGE	RUSS. ISSUE	RUSS. PAGE
The Discontinuity in the Shock Adiabatic Corresponding to a First-Order Phase Transition —N. M. Kuznetsov . . . . .	217	1	156
The Adsorption of Oxygen on Degassed Smooth Platinum in Electrolyte Solutions —V. I. Luk'yanycheva and V. S. Bagotskii . . . . .	221	1	160
The Capacity, Resistance and Injection Coefficient of a Semiconducting Electrode During Redox Reactions—V. A. Myamlin and Yu. Ya. Gurevich . . . . .	225	1	164
Acid Catalysis in Solutions in the Presence of Oxidized Coal—D. N. Strazhesko, Z. D. Skripnik, L. L. Chervyatsova, and G. F. Yankovskaya . . . . .	230	1	168
A Study of the Catalytic Oxidation of Ammonia on Platinum, by the Secondary Ionic Emission Method—Ya. M. Fogel', P. T. Nadykto, V. I. Shvachko, V. F. Rybalko, and I. E. Korobchanskaya . . . . .	233	1	171
Adsorption of Perfluorated Fatty Acids at the Solution-Air and Solution-Mercury Interfaces—A. N. Frumkin, V. A. Kuznetsov, and R. I. Kaganovich . . . . .	237	1	175
The Formation of Structure in Dispersed Systems—E. D. Yakhnin and A. B. Taubman . . . . .	241	1	179
The X-Ray Emission K-Spectra for Titanium in its Lower Oxides (Ti—TiO <sub>2</sub> ) —E. E. Vainshtein and V. I. Chirkov . . . . .	245	2	381
Investigations of Some Complexes of Chromium (V) by the EPR Method —N. S. Garif'yanov . . . . .	249	2	385
The Effect of Temperature on the Long-Term Adhesion Strength of Polyethylene —M. S. Dyl'kov, A. T. Sanzharovskii, and P. I. Zubov . . . . .	252	2	389
The Surface Effect in a Chemical Process—A. A. Zhukhovitskii, V. A. Grigorian, and E. Mikhaliuk . . . . .	255	1	392
Magnetic Susceptibility of Vanadyl Compounds of Carboxylic Acids—V. V. Zelentsov and V. T. Kalinnikov . . . . .	258	2	395
A New Determination of the Atomic and Electronic Structure of Dicyandiamide —Z. V. Zvonkova, V. Ya. Krivnov, and A. N. Khvatkina . . . . .	261	2	398
Thermal Decomposition Kinetics of N,N-Dimethylnitroamine—B. L. Korsunskii and F. I. Dubovitskii . . . . .	266	2	402
Rheology of Polymers. Theory of Thixotropy—A. I. Leonov and G. V. Vinogradov . . . . .	270	2	406

(continued)

Available From Consultants Bureau

DOKLADY AKADEMII NAUK SSSR  
PHYSICAL CHEMISTRY  
Vol. CLV, No 1-6, Mar, Apr 1964

CONTENTS (Contd)

	PAGE	RUSS. ISSUE	RUSS. PAGE
Free Radical Reactions in the Reaction Between Oxygen and Irradiated Potassium Palmitate—A. A. Revina and N. A. Bakh . . . . .	274	2	410
The Mechanism of Cyclic Trimerization of Acetylenes on Complex Organometallic Catalysts—V. O. Reikhsfel'd and K. L. Makovetskii . . . . .	278	2	414
The Steady Potential and Corrosion of Metals in Fused Salts—M. V. Smirnov, V. P. Volodin, and I. N. Ozeryanaya . . . . .	282	2	418
The Influence of the Nonsolvent on the Physical and Mechanical Properties of Concentrated Polymer Solutions—V. P. Stesikov, Yu. V. Ovchinnikov, and V. A. Kargin . . . . .	286	2	422
Measurement of the Drift Rate of Aerosol Particles in the Field of Diffusing Water Vapor —A. I. Storozhilova . . . . .	290	2	426
Degradation of Polymer Molecules in a Solution (Polyisobutylene, Polymethylmetha- crylate) When Passing the Prestationary Stage of Deformation—A. A. Trapeznikov . . . . .	294	2	430
The Kinetics and Mechanism of the Homogeneous Catalytic Reduction of Quinones by Carbon Monoxide in Solution—A. B. Fasman, V. A. Golodov, and D. V. Sokol'skii . . . . .	298	2	434
On the Mechanism Underlying the Interaction of Cyclohexane with the Surface of a Metallic Catalyst—A. A. Balandin, B. S. Gudkov, and R. M. Fedorovich . . . . .	302	3	626
Vibrational Spectra and Aromaticity of Six-Membered AZA Rings—V. I. Berezin . . . . .	305	3	629
Classification of the Chemical Bond from the Hyperfine Structure of the EPR Spectra of Manganese—L. V. Bershov and A. S. Marfunin . . . . .	308	3	632
Determination of the Kinetic Coupling Constants of Positronium and Inorganic Ions —V. I. Gol'danskii, V. G. Firsov, and V. P. Shantarovich . . . . .	312	3	636
Effect of the Structure of Porous Solids on the Specific Surface Area Determined by the Method of Gas Permeability—B. N. Goshchitskii, I. S. Izrallevich, and S. N. Novikov . . . . .	316	3	640
Nonstationary Evaporation of a Droplet Covered by an Adsorbed Layer—B. V. Deryagin and Yu. S. Kargin . . . . .	320	3	644
Compensation Effect of $\eta$ and $K$ in Topokinetic Reactions—B. V. Erofeev and V. A. Protashchik . . . . .	323	3	647
Some Properties of Mercury Sulfide Films on the Surface of a Mercury Electrode —S. I. Zhdanov and B. A. Kiselev . . . . .	327	3	651
Photosorption of Oxygen on Cadmium Sulfide—V. A. Kotelnikov . . . . .	330	3	654
Triplet Molecules in Liquid Benzene. Photochemical Processes in a Thin Absorbing Layer—V. A. Krongauz . . . . .	333	3	658
The Properties of a Double Layer and the Electrostatic Adsorption of Ions—V. G. Levich, V. A. Kir'yanov, and V. S. Krylov . . . . .	337	3	662
Birefringence of Form in Spherulites and Stretched Polypropylene Films —V. I. Selikhova, G. S. Markova, and V. A. Kargin . . . . .	341	3	666
Elution Chromatography in Columns with a Moving Sorbent—V. P. Alishoev and V. G. Berezkin . . . . .	343	4	876
Crystallization Overvoltages During Electrolysis of Fused Salts—A. N. Baraboshkin, L. T. Kosikhin, and N. A. Saltykova . . . . .	347	4	880
Kinetics of Azoisobutyric Acid Dinitrile-Initiated Polymerization of Acetylene Hydrocarbons—I. M. Barkalov, V. I. Goldanski, and Ho Min-Kao . . . . .	350	4	883
Theory of the Thermophoresis of Moderately Large Aerosol Particles—B. V. Deryagin and Yu. I. Yalamov . . . . .	353	4	886
Characteristics of Butadiene Polymerization in the Presence of Complex Cobalt Catalysts—I. Diaconescu and S. S. Medvedev . . . . .	358	4	890

(Continued)

Available From Consultants Bureau

**DOKLADY AKADEMII NAUK SSSR**  
**PHYSICAL CHEMISTRY**  
 Vol CLV, No 1-6, Mar, Apr 1964

CONTENTS (Contd)	PAGE	RUSS. ISSUE	RUSS. PAGE
Adsorption of Fatty Acids at Solution/Air and Solution/Mercury Interfaces —R. I. Kaganovich, V. M. Gerovich, and T. G. Osotova . . . . .	361	4	893
The Possible Effect of a Diffusion Current of the Reaction Products of a Flame on the Decomposition of the Condensed Phase—O. I. Leipunskii . . . . .	365	4	897
How the State of Aggregation of Dyes Affects the Sign of the Photocurrent Carriers —A. N. Terenin, E. K. Putseiko, I. A. Akimov, and A. M. Meshkov . . . . .	368	4	900
Methylmethacrylate Polymerization Initiated by the Reduced Forms of Chlorophyll and Hematoporphyrin—A. V. Umrikhina and A. A. Krasnovskii . . . . .	372	4	904
A Study of the State of Water in Phosphomolybdic Acid by the Nuclear Magnetic Resonance Method—V. F. Chuvaev, V. Ya. Kabanov, and Vikt. I. Spitsyn . . . . .	376	4	908
The Use of the Emanation Method in an Investigation of the Structure of Zinc Oxide and Nickel Oxide with Additions of the Oxides of Lithium and Gallium —M. D. Shibanova and G. M. Zhabrova . . . . .	380	4	912
The Mechanism of the Dissolution of Zirconium in Acid Solutions of Fluorides —V. A. Gil'man and Ya. M. Kolotyrkin . . . . .	384	5	1155
The Faraday Rectification for an Electrolyte—Semiconductor Contact —Yu. Ya. Gurevich and V. A. Myamlin . . . . .	388	5	1159
The Radiation Chlorination of Certain Organochlorosilanes and Organopolysiloxanes —R. V. Dzhagatspanyan, M. T. Filippov, G. V. Mousarev, V. I. Zetkin and V. R. Rozenberg . . . . .	393	5	1163
Spectral Sensitization of the Internal Photoeffect of Copper Phenylacetylenide by Dyes —V. S. Myl'nikov and A. N. Terenin . . . . .	397	5	1167
Fibrous Structures and Gel Formation in Isotactic Polystyrene —N. Ya. Rapoport-Molodtsova, T. A. Bogaevskaya, T. A. Koretskaya, T. I. Sogolova, and V. A. Kargin . . . . .	400	5	1171
Determination of the Thermodynamic Constants of Molecular Compounds by the Dielectrometric Titration Method—I. G. Arzamanova, E. N. Gur'yanova and I. P. Gol'dshtein . . . . .	403	6	1391
A Spectral Investigation into the Reaction of Solid Layers of Porphin Dyes with Hydrazine Vapor—A. T. Vartanyan . . . . .	406	6	1394
Antiradical Activity and Radioprotective Properties of Free-Radical Reaction Inhibitors —E. B. Burlakova, V. D. Galtseva, L. V. Slepukhina, N. G. Khrapova and N. M. Emanuel' . . . . .	410	6	1398
An Electron-Microscope Investigation into the Structure of the Copolymer of Diethylvinyl Phosphonate and Acrylic Acid Possessing Complexing Properties —V. A. Kargin, A. A. Efendiev and Z. Ya. Berestneva . . . . .	413	6	1401
The Part Played by the Polarity of the Intermolecular Liquid and the Intensity of its Interaction with the Surface of Silicic Acid Hydrogel Particles in the Formation of Silica Gel Textures—B. M. Mitsyuk, Z. Z. Vysotskii and M. V. Polyakov . . . . .	416	6	1404
Radiolysis of Hydrocarbons on a Semiconductor Adsorbent—I. A. Myamnikov . . . . .	419	6	1407
An Investigation into the Thermodynamic Properties of Solutions of Strong Electrolytes in Solvents with High Dielectric Constants—Yu. M. Povarov, Yu. M. Kessler, A. I. Gorbanev, and I. V. Safonova . . . . .	423	6	1411
Neutron-Diffraction Determination of the Position of the Hydrogen Atoms in Dicyandiamide—N. V. Rannev and R. P. Ozerov . . . . .	426	6	1418

(Continued)

Available From Consultants Bureau

DOKLADY AKADEMII NAUK SSSR  
PHYSICAL CHEMISTRY  
Vol CLV, No 1-6, Mar, Apr 1964

CONTENTS (Contd)

	PAGE	RUSS. ISSUE	RUSS. PAGE
Polymorphism and Formation of Hydroxyethylated Alcohol Hydrates and Their Equilibrium with Monolayers—A. A. Trapeznikov and T. A. Lomonosova . . . . .	429	6	1419
Laws Governing Adsorption of Organic Substances on Mercury—G. A. Todoradze . . . . .	433	6	1423

Available From Consultants Bureau

**ELEKTROSVYAZ'**  
**Vol XVIII**  
**CONTENTS**

	Page
K. N. Anan'ev and V. N. Troitskiy: Experimental Study of the Diffraction of Ultra-short Waves at Mountain Ranges . . . . .	1
Ya. A. Fiks: Signal Distortion Due to the Multibeam Character of the Ionospheric Scattering Mechanism . . . . .	5
A. F. Beletskiy: The Amplitude-Difference Method of Forming a Single Sideband Signal . . . . .	13
V. N. Kuleshov and A. A. Morozov: Passage of Signal and Noise Through Frequency Detectors . . . . .	19
E. V. Kordonskiy: Improving the Characteristic of a Quantizing Device by Adding Low-Frequency Noise to the Signal . . . . .	26
E. G. Servinskiy: The Advantage of Using High-Basis Frequency Codes . . . . .	32
L. G. Dorfman: A Symmetrical 12-Pole Coaxial Bridge . . . . .	37
B. A. Chekannikov and V. N. Detinko: Voltage Transformation with an Arbitrary Reactive Load . . . . .	44
A. S. Konson, P. I. Tarasov and M. F. Toporov: Basic Engineering Economics of Television Transmission Studio Equipment . . . . .	51
P. A. Frolov and M. E. Rudakov: Aerial Communication Cables . . . . .	55
<b>BRIEF COMMUNICATIONS</b>	
A. S. Yerenin and B. S. Rozov: Dependence of Transistor Gain on Emitter Current . . . . .	60
A. F. Zenevich: Influence of Asymmetry of Distributed Loads on the Sensitivity of a Communications Circuit to Interference . . . . .	61
Nina Nikolayevna Shumskaya (On Her Sixtieth Birthday) . . . . .	63
In Our Forthcoming Issues . . . . .	64
New Books . . . . .	64

**RADIOTEKHNIKA**  
**Vol XIX, No 10, 1964**  
**CONTENTS**

S. A. Zyul'ko: Achievements and Potentialities of Laser Techniques . . . . .	67
A. M. Gorinshteyn: Calculation of Transients in Long Lines Based on the Expansion Theorem . . . . .	71
A. M. Model': Analysis of Directional Couplers with Discrete Coupling . . . . .	75
V. I. Beketov: Analysis and Synthesis of Polarization Ellipses . . . . .	81
V. A. Styblik, E. A. Akchurin, and L. N. Dolbnina: Tunnel-Diode Frequency Converter . . . . .	84
V. K. Georgiyev and N. T. Petrovich: Error Probabilities in the Reception of Differential-Phase-Keying Telegraphy Signals in the Presence of Fading . . . . .	89
V. V. Tavetnov: Phase-Difference Distribution of Sinusoidal Signals and Noncorrelated Gaussian Noise in a Two-Channel System with Identical Channels . . . . .	92
D. V. Ageyev and Yu. N. Babanov: Transmission of Radio Signals with Overlapping Frequency Spectra . . . . .	95
N. S. Nikolayenko: Parallel Feedback in Transistor Amplifiers with Direct Interstage Coupling . . . . .	100
A. M. Mishin: Properties of Limiters Using the Saturation Effect of a p-n Junction . . . . .	108
K. M. Kudelin: Thermal Operating Conditions of a p-n Junction Crystal for a Shock Load . . . . .	113
Zh. B. Linkovskiy: "Hot" Stand-by of Equal Functional Elements of Radio-Electronic Equipment in the Sense of Siforov . . . . .	117
Letters to the Editor	
Comments on A. A. Tyutin's Paper "A Method of Reducing a Multipole Circuit to an Equivalent Four-Pole" . . . . .	120
S. I. Zilitinkevich (On His Seventieth Birthday) . . . . .	121
N. I. Chistyakov (On His Fiftieth Birthday) . . . . .	122
The Leningrad Nineteenth Radio-Day Scientific and Technical Conference . . . . .	123
The Twentieth All-Union Radio-Day Conference . . . . .	124
New Books . . . . .	127

# SOVIET PLANT PHYSIOLOGY

PROCEEDINGS of the  
ACADEMY OF SCIENCES  
of the USSR

*A translation of (FIZIOLOGIYA RASTENII)*

*A publication of the Academy of Sciences, USSR*

© 1968 CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N.Y.

Volume 11, Number 1

January-February, 1964

## CONTENTS

	P A G E	
	ENG.	RUSS.
The Problems of Plant Physiology in the Light of the Decisions of the December Plenary Meeting of the Central Committee of the Communist Party of the Soviet Union . . . . .	1	3
Effect of the Spectral Composition of Light on Fractionation of Oxygen Isotopes Absorbed by Hydrophytes—V. M. Kuturyn, N. P. Voskresenskaya, M. V. Ulubekova, G. S. Grishina, and I. K. Zadorozhnyi . . . . .	4	7
On the Changes in the Qualitative Course of Photosynthesis in Apple Leaves During Vegetation—Kh. I. Myaétalu . . . . .	9	13
Formation of Amino Acids During Photosynthesis: Identification and Degradation of Glycine, Alanine, and Serine—E. G. Zak and A. A. Nichiporovich . . . . .	15	20
Incorporation of N <sup>15</sup> -Hydroxylamine into the Proteins of Wheat Shoots—A. A. Bundel', V. L. Kretovich, and N. V. Borovikova . . . . .	25	31
Redistribution of Radioactive Assimilates in the Leaf Tissues of Cereals—N. A. Pristupa . . . . .	31	38
Utilization of the Products of Photosynthesis in Respiration—L. A. Filippova, V. L. Voznesenskii, and V. F. Bogatkina . . . . .	37	43
On the Conditions of Evolution of the Diene C <sub>5</sub> H <sub>8</sub> (Isoprene) from Leaves—G. A. Sanadze . . . . .	42	49
Gaseous Excretions and Amino Acid Composition of Green Peas—A. S. Luchko, G. V. Porutskii, and A. G. Yavorskii . . . . .	46	53
Influence of the Toxin of <i>Botrytis cinerea</i> and Its Polysaccharide Fraction on Oxidative Phosphorylation in Cabbage Tissues—B. A. Rubin and V. A. Aksanova . . . . .	51	59
The Effect of Superphosphate on the Translocation Assimilates in Potato—A. A. Anisimov . . . . .	55	64
Amino Acid Composition of the Bleeding Sap and Leaves of Corn Under Various Nitrogen- and Phosphorus-Nutrition Conditions—I. V. Mosolov and A. N. Lapshina . . . . .	61	71
The Absorption of Mineral Substances by Plants Subjected to a Drying Wind—I. N. Andreeva . . . . .	68	79
Influence of Dehydration on the Ability of Tissues of <i>Vicia faba</i> to Oxidize Glutamic Acid—T. F. Korenkaya and V. N. Zbolkevich . . . . .	74	87
The Utilization of Suction Tension in Leaves to Determine the Capacity of Plants to Absorb Soil Moisture—R. L. Iliev . . . . .	79	93
On the Water Régime of Wheat Roots—L. Kh. Gordon . . . . .	84	100

(Continued)

Available From Consultants Bureau

**FIZIOLOGIYA RASTENII**  
Vol XI, No 1, Jan, Feb 1964

**CONTENTS** (continued)

	<b>P A G E</b>	
	<b>ENG.</b>	<b>RUSS.</b>
Formation and Accumulation of Inulin in Seeds—A. M. Sobolev . . . . .	89	106
The Effect of the Period of Storage on the Content of Nucleic Acids in the Tissues of Cotton Seed —F. Yu. Rzhetskaya . . . . .	94	112
On the Shifting of the Isoelectric Points of the Protoplasm, Nucleus and Nucleolus in the Cells of the Apical Cone of Timothy—L. P. Chel'tsova . . . . .	102	120
The Culture of Isolated Buds of Fruit Trees—T. V. Nekrasova . . . . .	107	127
<b>BRIEF COMMUNICATIONS</b>		
Accumulation of Microquantities of Strontium by Green and Blue-Green Algae—A. L. Agre and A. P. Raiko . . . . .	114	135
Reversible Bleaching of Chlorella Induced by Certain Mechanical Forces—N. S. Ivanova and L. V. Spektorova . . . . .	116	137
Uptake of Heavy Oxygen Water in <u>Vicia faba</u> Leaves and Its Translocation in Plants —N. G. Vasil'eva and Z. S. Burkina . . . . .	118	139
<b>METHODS</b>		
Determination of Colloid-Bound Water in Plant Tissue Homogenates by a Nonindicator Refractometric Method—E. A. Yablonskii . . . . .	122	142
Electrophoresis of Plant Proteins in a Synthetic (Polyacrylamide) Gel—V. I. Safonov and M. P. Safonova . . . . .	127	147
<b>BOOK REVIEWS</b>		
P. A. Genkel. Plant Physiology and Elements of Microbiology—Reviewed by V. V. Anikiev . . .	134	154
<b>CHRONICLE</b>		
International Symposium on Cytoecology—N. A. Satarova and T. I. Trunova . . . . .	136	156

Available From Consultants Bureau



**FOLIA MORPHOLOGICA**  
Vol XXIII, No 1, 1964

**CONTENTS**

	<b>Page</b>
A. Pachalski: Functional metaplasia of cutaneous connective tissue as interpositional material in arthroplasty . . . . .	1
W. Woźniak, B. Otulakowski, A. Kiersz: The hypogastric nerves in dogs . . . . .	16
R. Aleksandrowicz: On the vascular segments of the liver . . . . .	26
J. Jordan: Contribution to the variations of the azygous vein system in man . . . . .	41
B. Goetzen: The internal cerebral veins in man. Part I. . . . .	44
E. Augustyniak: Chiari's network in <i>Macacus rhesus</i> and <i>Macacus cynomolgus</i> . . . . .	70
J. Gładkowska-Rzeczycka: Accessory bundle of the short head of the <i>Biceps femoris</i> muscle . . . . .	75
M. Nowak, M. Stępień, A. Zbrodowski: Variations of the origins of the branches of the arch of the aorta in the genus <i>Macaca</i> . . . . .	79
E. Kołkiewicz-Rabek: Rapid fixation of bone material by means of methyl methacrylate based on the process of photopolymerization sensitized with benzoin . . . . .	84

Available From Office of Technical Services

## ENGINEERING JOURNAL

Vol V, No 1, 1965

- USSR -

[Following is the translation (omitting articles on pages 94-102, 110-120, 174-176, 176-180, 196-199) of the Russian-language periodical Inzhenernyy Zhurnal (Engineering Journal), edited by A.A. Nikol'skiy, Moscow, Vol V, No 1, Jan-Mar 1965.]

## CONTENTS

GENERAL MECHANICS	Page
Duvakin A.P. On the Stability of Disc Movement	1
Van Chjao Lin, On the Stability of the Positions of Dynamic Equilibrium of a Particular Mechanical System	12
AEROHYDRODYNAMICS	
Fonarev A.S. Unsteady Expansion of a Gas into a Vacuum with Various Laws and Duration of Energy Release	21
Lifshits Yu.B. The Flow in the Vicinity of The Point of Intersection of a Sonic Line With a Shock Wave	42
Neland V.Ya. On the Analysis of the Characteristics of the Separated Zone and the Base Pressure in Supersonic Flow of a Gas About Bodies	52
Turkin V.K. Calculation of Sedimentation Under the Action of the Force of Gravity in the Case when the Viscosity Depends on the Concentration Following the Einstein Law	64
Vakhomchik V.P. On the Calculation of Nonstationary Forces in a Blading Lattice	86

(Continued)

Available From JPRS 29837

Contents (Continued)

Page

- Malkin O.A., Grigor'yev V.N., Vitshas A.F. An  
Experimental Investigation of Shock Waves  
Induced by an Impulse Current in a Rare-  
fied Gas 99

THEORY OF ELASTICITY AND PLASTICITY

- Sokolovskiy V.V. The Dilatant Flow of a Fluid in  
Toroidal Tubes 111  
Agamirzyan L.S. The Penetration of a Curved Punch  
into a Plastic Strip 128  
Ookhasi I., Murakami S. One-Sided Elasto-Plastic  
Bending of a Circular Plate with Radial  
Tension omitted  
Guz' A.N., Savin G.N. On the Stress State Near  
Curvilinear Reinforced Openings in Shells 146  
Lampsi B.B. Stresses in a Long Strip from Tan-  
gential Forces on its Edge omitted  
Meshcheryakov V.B. On the Effect of Shears on  
the Behaviour of Thin-Walled Tubes 156  
Yelpat'yevskiy A.N., Vasil'yev V.V. The Study  
of the Stress State of a Cylindrical  
Shell Wound from Glass Fiber 168  
Vasil'yev V.V. An Investigation of the Edge Ef-  
fect in a Cylindrical Fiberglass Shell 189

BRIEF NOTES

General Mechanics

- Zakoteyeva L.V., Polyachenko V.V. Optimal Three-  
Impulse Change of Circular Orbit Plane with  
the Application of Thrust Impulses on Pas-  
sage of Nodal Lines 208

Aerohydrodynamics

- Rykov V.A. On the Fundamental Solution of the Pro-  
blem of the Flow Around a Symmetrical Wing in  
a Longitudinal Magnetic Field 214  
(Continued)

Available From JPRS 29837

Contents (Continued)

	Page
Agafonov V.P. Evaluation of the Effect of the Relaxational Boundary Layer on the Characteristics of the Viscous Flow About a Wedge	220
Zhurin V.V., Kostko O.K. Calculation of the Thermodynamic Parameters of a Gas behind a Strong Shock Wave in Helium	229
Sabodash P.F. On the Penetration of a Normal Pressure Pulse Propagating with Constant Velocity into an Ideal Lamellar Medium	236
Dobrovolskiy V.L. Solution of One Nonlinear Problem of the Charge in a Shaft Furnace	omitted
Parton V.Z. One Problem in the Theory of Consolidation of Liquid-Saturated Densified Porous Media	omitted

Theory of Elasticity and Plasticity

Khrustalev A.F. The Contact Thermoelastic Problem for a Semispace	245
Borodachev N.M. On the Penetration of a Heated Punch into an Elastic Semiplane	250
Livanov K.K. On the Comparison of Certain Frequency Equations in the Use of the Plane Section Law and Exact Linearized Theory	256
Dergach P.Kh., Shevchenko V.P. On the Load Carrying Capacity of a Shallow Spherical Shell	262
Gulyayev Yu.P. Free Torsional Vibrations of a Circular Cone with a Certain Type of Cylindrical Anisotropy	268

Available From JPRS 29837

# Measurement Techniques

*A translation of Izmeritel'naya Tekhnika, a publication of the  
Academy of Sciences of the USSR*

Number 10

October, 1964

## CONTENTS

	PAGE	RUSS. PAGE
The Role of Standardization in Raising the quality of Production and Improving the Economy of Our Country. <u>V. V. Boitsov</u> . . . . .	855	2
Conference On the Problem of Promoting the Role of Standardization in Raising the Quality of Production and Improving the Economy of our Country. . . . .	867	13
Notice . . . . .	875	20
Inter-Trade Committee for Applying the SI. <u>E. M. Evich</u> . . . . .	877	21
INTERNATIONAL SYSTEM OF UNITS (SI)		
Methods Circular No. 1 on the Procedure for Adopting the International System of Units (SI) in Normalizing Technical Specifications. . . . .	878	22
Alphabetical Index for the Combined Table of Measurement Units Named in Methods Circular No. 1. . . . .	901	42
Principles Used in Deriving the International System of Units. <u>K. P. Shirokov</u> . . . . .	905	44
Reference Standards for Fundamental SI Units and the Provision of Uniform Measurements in the USSR. <u>S. V. Gorbatshevich</u> . . . . .	914	50
International System of Units in Practical Electrical and Magnetic Measurements. <u>E. N. Chechurina</u> . . . . .	918	54
International System of Units in the Field of Thermal Measurements. <u>B. N. Oleinik</u> . . . . .	923	57
Specifying the Concept of "Load Capacity". <u>E. L. Verein</u> . . . . .	929	62
INFORMATION		
Awards for High-Precision Measuring Instruments. <u>P. P. Arapov</u> . . . . .	930	63
The Scientific and Technical Journals which will be Published in 1965 by the State Committee of Standards, Measures and Measuring Instruments of the USSR are Obtainable by Subscription. . . . .	932	65

Available From Instrument Society of America

# Measurement Techniques

*A translation of Izmeritel'naya Tekhnika, a publication of the  
Academy of Sciences of the USSR*

Number 11

November, 1964

## CONTENTS

	PAGE	RUSS. PAGE
Functions and Tasks of Modern Metrology. <u>V. O. Arutyunov, L. M. Zaks, and A. I. Ivlev</u> . . . . .	937	1
Suggestions for a GSSSD (State System of Standard Reference Data). <u>A. M. Shapovalov</u> . . . . .	941	6
Certain Considerations Regarding the State System of Standard Reference Data. <u>L. Ts. Shkap.</u> . . . .	943	7
<b>LINEAR MEASUREMENTS</b>		
Investigation of Contact Methods for Measuring Internal Sizes of Components with Stationary Instruments. <u>G. B. Kalner</u> . . . . .	945	8
Maximum Deviation in the Readings of Measuring Instruments. <u>A. I. Ivantsov and V. V. Asanov.</u> . .	950	11
<b>MEASUREMENTS OF MASS</b>		
Investigation of Dynamic Errors in Weighing Loads in Motion. <u>G. A. Saburdo and V. P. Topolev.</u> . .	954	14
<b>MECHANICAL MEASUREMENTS</b>		
Tasks of Metrology in the Field of Vacuum Measurements. <u>M. A. Gulyaev and A. V. Eryukhin.</u> . . .	958	17
Reference Dead-Weight Piston Manometer up to 25000 kg-wt $\text{cm}^2$ ( $\sim 2.45 \cdot 10^8 \text{ N/m}^2$ ). <u>E. F. Dolinskii, L. A. Kirmalov, and G. I. Polukhin.</u> . . . . .	962	20
Set of Reference 1st Grade Dynamometers. <u>L. M. Maksimov.</u> . . . . .	968	24
Checking Pendulum Impact Testers. <u>F. S. Savitskii</u> . . . . .	972	26
Transverse Sensitivity of Piezoelectric Accelerometric Transducers. <u>V. Ya. Barash.</u> . . . . .	975	28
Measuring Irregularities in the Angular Velocity of Rolling-Mill Rolls. <u>V. N. Vydrin, P. N. Amosov,</u> <u>A. S. Fedosienko, and V. I. Krainov.</u> . . . . .	980	31
Instrument for Measuring Vibration Amplitudes. <u>B. E. Bolotov.</u> . . . . .	984	34
Effect of Inertia on Vibration-Frequency Transducers. <u>L. G. Étkin, V. Ya. Yanovskii,</u> <u>and D. V. Ramm.</u> . . . . .	985	35
<b>THERMOTECHNICAL MEASUREMENTS</b>		
Measurement of the Metal Surface Temperature in Rolling. <u>Ya. B. Gurevich and A. P. Bashchenko</u> .	989	37
<b>ELECTRICAL MEASUREMENTS</b>		
Multiplying Circuits with Semiconductor Diodes. <u>K. B. Karandeev and F. B. Grinevich.</u> . . . . .	991	39
Comparator Bridge for Testing High-Precision Resistance Boxes and dc Bridges. <u>S. M. Kal'f-Kalif and A. V. Martynov.</u> . . . . .	997	43
Evaluating the Dynamic Characteristics of Pulse-Frequency and Pulse-Width Modulators. <u>R. Ya. Syropyatova and R. R. Knarchenko</u> . . . . .	1000	45
<b>HIGH AND ULTRAHIGH FREQUENCY MEASUREMENTS</b>		
Analysis of the Operation of Automatic Thermistor Bridges. <u>A. S. Elizarov</u> . . . . .	1006	49
Measurements of Permittivity with an Autodyne Generator. <u>Yu. D. Kozhelev.</u> . . . . .	1011	52
<b>LIQUID AND GAS FLOW MEASUREMENTS</b>		
Measuring Flow by Means of the Average Dynamic Head. <u>M. Z. Shvartsman</u> . . . . .	1014	54
Gland Contrivance for Clearing Take-off Pipes of a Constricting Device. <u>A. L. Antonovich</u> . . . .	1018	55

(Continued)

Available From Instrument Society of America

IZMERTSEL' NAYA TEKHNIKA  
No 11, 1964

CONTENTS (Contd)	PAGE	RUSS. PAGE
INSPECTION OF MEASURES AND INSTRUMENTS		
Inspection of the Measuring Equipment in Collective Farms. <u>L. Sh. Vinderman</u> . . . . .	1017	56
Seminar on Technical Progress. <u>P. N. Stebelev</u> . . . . .	1019	58
REVIEWS AND REPORTS		
Amplifying Transistors with a High Input Impedance. <u>S. G. Golub' and B. R. Shul'man.</u> . . . . .	1021	59
STATE COMMITTEE OF STANDARDS, MEASURES AND MEASURING INSTRUMENTS OF THE USSR		
Measures and Measuring Instruments Approved by the State Committee as the Result of Their State Testing and Passed for Use in the USSR . . . . .	1026	63
The 1965 Issues of a New Scientific Journal <i>Avtometriya</i> of the USSR Academy of Sciences, Siberian Branch are now Open for Subscription . . . . .	1028	65

Available From Instrument Society of America

Table of Contents

Transactions of the Symposium on Ferromagnetism and Ferroelectricity  
(Leningrad, 30 May - 5 June 1963)

	Page	
	Orig.	Trans.
Regarding the coexistence of magnetic and electric ordering crystals - G.A.Smolenskii, V.A.Bokov & A.I.Mitsek	614	521
Theoretical model of $ABO_3$ type ferroelectrics - V.T.Khozyainov	620	527
Contribution to the phenomenological theory of electric and magnetic dipole structures - V.N.Lyubimov	626	533
Calculation of the internal electric fields and their gradients in perovskite compounds with distinctive dielectric properties - Yu.N.Venevtsev, V.N.Lyubimov, S.P.Solov'ev & G.S.Zhdanov	630	537
Nature of the dielectric properties of $SrTiO_3 \cdot Bi_2O_3 \cdot 3TiO_2$ solid solutions - S.V.Bogdanov & K.V.Kiseleva	636	543
Antiferroelectricity in compounds with the perovskite structure - N.N.Krainik	643	550
Some factors affecting the character of ferroelectric phase transitions - V.Ya.Fritsberg & B.N.Rolov	649	556
Towards an explanation of some of the properties of ferroelectric materials with a diffuse phase transition - V.A.Isupov	653	560
Space symmetry of electric and magnetic dipole structures - V.N.Lyubimov	658	565
Crystallographical classification of ferroelectrics and its applications - L.A.Shuvalov	660	567
Change in the intensity of x-ray scattering by triglycine sulfate at the Curie point - N.N.Sirota, V.M.Varikash & E.A.Ovseichuk	666	573
Concerning the crystal chemistry of perovskites of complex composition - E.G.Fesenko, V.S.Filip'ev & M.F.Kupriyanov	669	576
X-ray diffraction studies of the high-temperature phase transitions in the $NaNbO_3$ - $NaTaO_3$ system - I.G.Ismailzade	675	582
Ferroelectricity in $SbSI$ and other compounds of Group V, VI and VII elements - V.I.Merts & R.Nitshe	681	588
Investigation of some solid solutions based on the ferroelectric-antiferromagnet $BiFeO_3$ - Yu.N.Venevtsev, G.S.Zhdanov, Yu.E.Roginskaya, S.A.Fedulov, V.V.Ivanova, V.V.Chkalova, A.S.Viskov, A.G.Kapyshev, V.S.Rondarenko & P.B.Ladyzhinskii	683	589
Some factors capable of influencing the Curie point of ferroelectric materials with the structure of potassium-tungsten bronze - Ya.Ya.Kruchan	691	598
Temperature dependence of the dielectric dispersion of polycrystalline $BaTiO_3$ and $SrTiO_3$ in a wide spectral range - V.N.Murzin & A.I.Demeshina	695	602
Contribution to the theory of domain wall motion in ferroelectrics - D.G.Sannikov	703	610
Concerning dispersion of the dielectric constant of ferroelectric materials - N.P.Khuchua & L.F.Lychkataya	708	615

(Continued)

Available From Columbia Technical Translations



IZVESTIYA AKADEMII NAUK SSSR, SERIYA FIZICHESKAYA  
Vol XXVIII, No 4, 1964

CONTENTS (Contd)

Investigation of the dispersion of the dielectric constant of barium titanate type ferroelectrics in the microwave region - M.M.Nekrasov & Yu.M.Poplavko	714	621
Frequency dependences of the motion of 90° domain walls in barium titanate - J.Fousek & J.Brezina	717	624
Statistical effects in periodic polarization switching - I.A.Andronova	722	629
Stabilization of the spontaneous polarization and the pyroelectric effect in gamma-irradiated triglycine sulfate crystals - V.A.Yurin & I.S.Zheludev	726	633
Electric conductivity anomaly in barium titanate single crystals annealed at high temperatures - E.V.Sinyakov & A.Yu.Kudzin	731	637
Concerning the nature of unipolarity of ferroelectric triglycine sulfate - V.A.Meleshina & I.S.Rez	735	641
Threshold and relaxation effects in uniaxial antiferromagnets - M.I. Kaganov & I.E.Chupis	741	647
Magnetic properties of some d and f metals (single and polycrystals) - V.I.Chechernikov & Iuliu Pop	748	654
Concerning the angular dependence of alternating field demagnetization - R.E.Ershov	751	657

Available From Columbia Technical Translations

TABLE OF CONTENTS

	Page	Page
	Orig.	Trans.
Transactions of the Seventh Conference on X-Ray Spectroscopy		
Determination of the charge of ions in compounds of Period 2 elements from x-ray emission spectra - A.T. Shuvaev	758	667
L <sub>II,III</sub> absorption spectra of potassium and chlorine in KCl - A.P. Lukirskii & T.M. Zimkina	765	674
Fine structure of the M absorption edges of krypton and N edges of xenon - A.P. Lukirskii, T.M. Zimkina & I.A. Brytov	772	681
Shape of the K $\alpha_{1,2}$ lines of iron-group elements - M.A. Blokhin & I.Ya. Nikiforov	780	689
Shape of the K emission bands of iron-group transition metals - I.Ya. Nikiforov & M.A. Blokhin	786	695
K Absorption spectra of Ca <sup>2+</sup> , K <sup>+</sup> and Cl <sup>-</sup> ions in water - R.L. Barinskii & B.A. Malyukov	790	699
Concerning the energy spectrum of metallic niobium - I.B. Shveitser, I.Ya. Nikiforov & V.P. Sachenko	797	705
X-ray spectroscopic investigations of the chemical bonds in sulfur compounds - M.A. Blokhin, A.T. Shuvaev & V.V. Gorskii	801	709
The Stark effect in the K absorption spectra of chlorine compounds - R.L. Barinskii & B.A. Malyukov	805	713
Character of the fine structure in the L <sub>III</sub> absorption spectra of some rare earth elements in oxides and hexaborides - N.V. Troneva	809	717
Influence of the chemical bonds on the K $\alpha_{1,2}$ doublet of Co and Ni - A. Meisel	811	719
Multiplet structure of the K $\alpha_{1,2}$ lines of the transition elements - V.I. Nefedov	816	724
Investigation of the K fluorescence spectrum of calcium in some compounds - A.T. Shuvaev, V.G. Zyryanov & V.V. Gorskii	823	731
Fluorescence spectra of silicon in some compounds - V.F. Demekhin & M.A. Blokhin	825	733
Emission spectra of scandium in Sc <sub>2</sub> O <sub>3</sub> - M.A. Blokhin & V.F. Demekhin	830	738
X-Ray emission bands and the magnetic properties of niobium - M.I. Korsunskii & Ya.E. Genkin	832	740
L Spectra of molybdenum in metallic form and in some compounds - M.A. Blokhin, V.F. Demekhin & I.G. Shveitser	834	742
M Emission bands of Zr, Nb and Mo and of some chemical compounds of these elements - T.M. Zimkina, O.A. Ershov & A.P. Lukirskii	836	744
L Emission spectra of titanium, titanium dioxide, chromium and chromium oxide - A.P. Lukirskii & I.A. Brytov	841	749
L $\alpha_{2,3}$ Emission spectra of cadmium and antimony in some semiconductor compounds - E.P. Domashevskaya & Ya.A. Ugai	843	761

(Continued)

Available From Columbia Technical Translations

CONTENTS (Contd)

Excitation of the spectrum by a monochromatic x-ray beam in local fluorescence analysis - K.I. Narbutt	857	765
Introduction of corrections in plotting concentration curves based on analysis of diffusion layers - I.B. Borovskii & T.A. Kupriyanova	863	771
Efficiency of secondary-electron multipliers with Au, LiF, MgF <sub>2</sub> , SrF <sub>2</sub> , BeO, KCl and CsI photocathodes in the 23.6 to 113 Å wavelength region - A.P. Lukirskii, E.P. Savinov, I.A. Brytov & Yu.F. Shepelev	866	774
Concerning the optimum location of the radiation source in an x-ray spectrograph - S.A. Ditsman	872	781
Some formulas for calculating the intensity of fluorescence excited by a polychromatic x-ray beam - A.P. Nikol'skii	877	786
Approximate calculation of the integral defining the intensity of x-ray fluorescence excited by a continuous spectrum - A.V. Pivovarov	880	789
Dependence of the integral intensity of reflected x-rays on the duration of coherent emission from the source - P.A. Bazirganyan	882	791
Calculation of the fine structure of the K absorption spectrum of copper - A.I. Kozlenkov	885	794
Investigation of the asymptotic scattering phases for metals of the iron transition group and copper-nickel alloys - V.A. Batyrev	897	806
Concerning the influence of temperature on the fine structure of the K absorption spectra of potassium halides. Part. 1 - O.P. Sharkin	906	814
Effects of temperature and minor impurities on the short wavelength fine structure of the absorption spectra of pure zinc and its alloys with silver - G.N. Romani, I.B. Borovskii & A.K. Puchkova	914	821
Concerning temperature melting of the short wavelength fine structure in the K absorption spectra of pure metals. Part II - G.N. Romani & O.P. Sharkin	919	825
Investigation of the L <sub>III</sub> absorption spectra of antimony and the K absorption spectra of phosphorus in binary semiconductor compounds of the Al <sup>III</sup> B <sup>V</sup> type - A.N. Gusatinskii & S.A. Nem-nonov	922	828
Interpretation of shifts of the K series lines of the transition elements. Wave functions for three atomic configurations of titanium - A.T. Shuvaev & G.M. Chechin	934	838

Available From Columbia Technical Translations

# BULLETIN OF THE ACADEMY OF SCIENCES, USSR DIVISION OF CHEMICAL SCIENCE

(IZVESTIYA AKADEMII NAUK SSSR  
A translation of SERIYA KHIMICHESKAYA)  
A publication of the Academy of Sciences of the USSR  
© 1965 CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11 N. Y.

Number 5

May, 1964

## CONTENTS

	P A G E	ENG.   RUSS.
<b>INORGANIC AND ANALYTICAL CHEMISTRY</b>		
Phase Equilibria in the Lanthanum Oxide - Alumina System—I. A. Bondar' and N. V. Vinogradova. . . . .	737	785
Investigation of Peroxyhydrates and Hydrates of the Carbonates of Rubidium and Cesium. Report 1. Isotherms of the Solubility at 0° of the Ternary Systems $Rb_2CO_3-H_2O_2-H_2O$ and $Cs_2CO_3-H_2O_2-H_2O$ —T. A. Dobrynina and R. S. Dzyatkevich . . . . .	742	790
<b>PHYSICAL CHEMISTRY</b>		
Polarographic Study of Certain Derivatives of $\gamma$ -Piperidone—S. G. Mairanovskii, D. I. Dzhabaridze, and O. I. Sorokin . . . . .	746	795
Thermographic Investigation of the Process of Dehydration and Decomposition of Certain 12-Heteropolyacids—A. A. Babad-Zakhrayapin and V. P. Mosseev. . . . .	750	799
Integral Intensities of the Carbonyl Bands of a Number of Pyrones and Quinones—M. E. Peral'ton, Yu. N. Sheinker, B. E. Zaitsev, and V. A. Podyshev . . . . .	754	804
Infrared Absorption Spectra of Oxofluorides of Certain Metals—Yu. Ya. Kharitonov and Yu. A. Butaev . . . . .	758	808
On the Theory of the Electrochemical Diode—B. M. Grafov . . . . .	763	814
Reactions of Nitrogen Atoms. Report 3. Rate Constant and Mechanism of the Elementary Reaction of Nitrogen Atoms with Acetylene—L. I. Avramenko and V. M. Krashen'kov . . . . .	770	822
Influence of the Surface on the Mechanism of Chain Condensation in the Gas-Phase Oxidation of n-Butane—Yu. D. Norikov, A. V. Bobolev, and É. A. Blyumberg . . . . .	774	826
<b>ORGANIC AND BIOLOGICAL CHEMISTRY</b>		
Hydrogenolysis of Cyclopentane Hydrocarbons in Presence of Platinum on an Alumina Carrier—I. V. Gotsinskaya, Kuo Ching-ling, and B. A. Kazanskii . . . . .	779	832
Addition of Some $\alpha$ -Halo Ethers to $\alpha$ -Alkylene Oxides—B. A. Arbusov and O. N. Nuretdinova . . . . .	783	836
Reaction of Dialkyl (or Aryl) Dichlorosilanes with Alkali Metals in Presence of Conjugated Dienes—O. M. Nefedov and M. N. Masakov . . . . .	787	840

(continued)

Available From Consultants Bureau

CONTENTS (Contd)

	P A G E	
	ENG.	RUSS.
Reaction of Hydrotriphenyltin with Oxygen and with Some Halogen-Containing Organic and Inorganic Compounds—A. E. Borisov and A. N. Abramova . . . . .	791	844
Homolytic Reactions of Tetraethyltin with Propyl Bromide—G. A. Razuvaev, N. S. Vyazankin, Yu. I. Dergunov, and E. N. Gladyshev . . . . .	794	848
Procedure in the Synthesis of Ethyllithium in an Atmosphere of Argon—T. V. Talalaeva and K. A. Kocheshkov . . . . .	800	855
Unsaturated Ketones and Macrocyclic Lactones. Communication 12. Synthesis of Macrocyclic $\beta$ -Hydroxy Lactones—L. D. Bergel'son and Yul. G. Molotkovskii . . . . .	805	860
Substituted Cyclopentadienes and Related Compounds. Communication 11. 1,2,3-Trimethylcyclopentadiene—V. A. Mironov, S. N. Kostina, E. V. Sobolev, and A. N. Elizarova . . . . .	808	864
Substituted Cyclopentadienes and Related Compounds. Communication 12. Equilibrium Mixture of 1,2- and 2,3-Dimethylcyclopentadienes—V. A. Mironov, S. N. Kostina, and A. N. Elizarova . . . . .	818	875
Decomposition of Lignin Models with a Solution of Sodium in Liquid Ammonia—A. F. Semechkina and N. N. Shorygina . . . . .	826	884
Hydroxylamine Derivatives. Communication 7. Synthesis of 4-Substituted 3-Isoxazolidinones—R. M. Khomutov, E. S. Severin, and M. Ya. Karpeiskii . . . . .	831	890
Free-Radical Addition of Low-Molecular-Weight Alcohols to Unsaturated Compounds—G. I. Nikishin and V. D. Vorob'ev . . . . .	835	894
Heterochain Polyesters. Communication 49. Laws of the Formation of Polyamide-Arylates Under the Conditions of Interphase Polycondensation—V. V. Korshak, S. V. Vinogradova, and Wu Pang-yuan . . . . .	838	897
Hydrogenation of Acetophenone Over an Rh—B Catalyst—A. M. Taber, N. S. Barinov, B. D. Polkovnikov, and A. A. Balandin . . . . .	844	904
<b>BRIEF COMMUNICATIONS</b>		
Electrical and Magnetic Properties of Polyarylenequinones—A. A. Dulov, B. I. Liogon'kii, A. V. Ragimov, A. A. Slinkin, and A. A. Berlin . . . . .	849	909
Dehydrogenation of 1-Methylcyclopentene in the Presence of Oxide Catalysts—N. I. Shulkin, Kh. Khofman, and L. A. Erivanskaya . . . . .	851	912
Polymerization of Ethylene on Chromium Oxide Catalyst at High Pressure—E. F. Alekseev and M. G. Gonikberg . . . . .	854	914
Exchange Reactions of Decaborane Complexes of the Type $B_{10}H_{12}(X)_2$ —L. I. Zakharida, V. I. Stanko, and A. I. Klimova . . . . .	857	917
The Synergistic Effect of Alcohols on the Inhibitory Properties of Aromatic Amines—E. T. Denisov and V. P. Shcheredin . . . . .	858	919
Electron Paramagnetic Resonance Spectra of Free Radicals Formed During the Photolysis of Frozen Basic Aqueous Hydrogen Peroxide Solutions—B. G. Ershov and A. K. Pliginskii . . . . .	862	922
Perfluoro-Tertiary Butyl Alcohol and the Dissociation Constants of Trifluoromethylcarboxylic Acids—L. L. Knunyants and B. L. Dyatkin . . . . .	863	923
Synthesis of Diethyl $\alpha, \beta$ -Dicarboethoxyadipate—V. I. Zaretskii and L. S. Val'bon . . . . .	866	925
Preparation of Aldehydes by Sodium Aluminum Hydride Reduction of Carboxylate Esters—L. I. Zakharin, V. V. Gavrilenko, and D. N. Maslin . . . . .	867	926
Proton Magnetic Resonance Spectra of Some Vinylsilicon Compounds—G. A. Razuvaev, A. N. Egorochkin, M. L. Khidkebel', and V. F. Mironov . . . . .	869	928
Synthesis of Some Acetylenic Alcohols—L. I. Zakharin, V. I. Stanko, and V. A. Bratshev . . . . .	871	931
Dichloromethylcarbamides of Dialkyl Phosphates—P. I. Allimov and L. N. Levkova . . . . .	873	932
Synthesis of Ionylideneacetaldehydes Based on Ionone Enol Ethers—B. M. Mikhailov and L. S. Povarov . . . . .	874	934
Isotopic Exchange of Hydrogen in 3,5-Dimethylisoxazole with Acids—V. I. Setina and S. D. Sokolov . . . . .	876	936

(Continued)

Available From Consultants Bureau

## CONTENTS (Contd)

	P A G E	
	ENG.	RUSS.
Integral Intensity of C=O Peaks in the IR-Spectra of Substituted $\alpha$ -Pyrones—M. E. Perel'son, Yu. N. Sheinker, N. D. Dmitrieva, E. A. Luk'yanets, N. P. Shusherina, and R. Ya. Levina. . . . .	879	938
Demonstration of a Heterolytic Mechanism for the Reaction of Triphenyl Tin Hydride —A. E. Borisov, A. N. Abramova, and Z. N. Parnes. . . . .	882	941
Anomalous Reaction of Phenylpropiolyl Chloride with Diacetonitrilodecaborane —L. I. Zakharkin, V. I. Stanko, and Yu. A. Chapovskii. . . . .	885	944
A New Method for Synthesizing the A Ring of Tetracyclines—A. I. Gurevich, M. G. Karapetyan, M. N. Kolosov, V. V. Onoprienko, and M. M. Shemyakin. . . . .	886	945
Synthesis of Furan Acids—V. G. Glukhovtsev and S. V. Zakharova. . . . .	887	945
Synthesis of 2-Alkyl-1,2-Oxaborolanes—B. M. Mikhailov and V. A. Dorokhov. . . . .	887	946
The Nature of the Second Catalytic Wave of Albumins in Solutions of Cobalt Salts —S. G. Mairanovskii and É. F. Mairanovskaya. . . . .	888	947
The Analysis of Amino Acids by Capillary Chromatography Methods—S. V. Vitt, M. B. Saporovskaya, and V. M. Belikov. . . . .	889	947
Infrared Spectra of Protonated Aromatic Hydrocarbons—V. A. Koptiyug, L. K. Baeva, V. G. Shubin, D. V. Korchagina, A. M. Komagorov, and A. I. Rezvukhin. . . . .	890	948

Available From Consultants Bureau

# BULLETIN OF THE ACADEMY OF SCIENCES, USSR DIVISION OF CHEMICAL SCIENCE

(IZVESTIYA AKADEMII NAUK SSSR)

A translation of *SERIYA KHIMICHESKAYA*)

A publication of the Academy of Sciences of the USSR

© 1965 CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N. Y.

Number 6

June, 1964

## CONTENTS

	P A G E	R U S S .
Deeply Esteemed Ivan Vladimirovich [Tananaev] . . . . .	893	953
<b>PHYSICAL CHEMISTRY</b>		
Infrared Absorption Spectra of Solutions of Diazonium Salts in the Region of 2200-2300 $\text{cm}^{-1}$ -L. A. Kazitsyna, B. S. Kikot', and O. A. Reutov . . . . .	894	955
Infrared Absorption Spectra of Semi- and Thiosemicarbazones of a Number of Aldehydes and Ketones-R. R. Shagidullin, F. K. Sattarova, O. A. Raevskii, G. K. Budnikov, and Yu. P. Kitaev . . . . .	898	960
Polarography of Organohalogen Compounds. Report 3. Polarography of $\alpha$ -1,2,3,4,5,6-Hexa- bromocyclohexane and Paradibromobenzene-S. I. Zhdanov . . . . .	903	966
On the Polarographic Behavior of Dihydrodioxobenzotrypticene-E. I. Klabunovskii, L. V. Antik, and A. A. Balandin . . . . .	908	971
Study of Tautomerism and Geometrical Isomerism of Nitrogen-Containing Derivatives of Carbonyl Compounds. Report 12. Polarographic Study of Semi- and Thio- semicarbazones of Aliphatic Aldehydes-Yu. P. Kitaev and G. K. Budnikov . . . . .	914	978
On the Mechanism of the Catalytic Dehydration of Butanol-2 on the Surface of Aluminum Oxide-G. V. Isagulyants, Yu. I. Derbentsev, E. I. Klabunovskii, and A. A. Balandin . . . . .	920	985
Investigation of the Radiation Stability of the Carboxyl Cation-Exchange Resin KB-6 -E. D. Kiseleva, K. V. Chmutov, M. M. Klientovskaya, and A. B. Pashkov . . . . .	925	990
Directed Change in the Selectivity of the Action of Catalysts in the Process of Hydrogenation of the Dienone Group. Report 1. Hydrogenation of 6-Methylheptadiene-3,5-Dione-2 on Nickel Catalysts-L. Kh. Friedlin, N. V. Borunova, G. I. Samokhvalov, M. A. Miropol'skaya, M. Ts. Yanotovskii, L. I. Gvinter, and N. I. Fedotova . . . . .	930	996
<b>ORGANIC AND BIOLOGICAL CHEMISTRY</b>		
Reaction of Chloroethylenes with Cyclic Dienes, and the Structure of the Adducts Formed -B. A. Arbuzov and A. N. Vereshchagin . . . . .	936	1004
Tetracyclines. Communication 21. Synthesis of 2- and 3-Substituted 10-Oxo-9-Hydroxy-9- Methyl-1,2,3,4,4a,9,9a,10-Octahydroanthracenes-M. M. Shemyakin, M. N. Kolosov, Hsueh Yu-yuan, M. G. Karapetyan, Shên Hui-yu, and A. I. Gurevich . . . . .	944	1013

(Continued)

Available From Consultants Bureau

CONTENTS (continued)

	P A G E	
	ENG.	RUSS.
Tetracyclines. Communication 22. Stereochemistry of 2- and 3-Substituted 10-Oxo-9-Hydroxy-9-Methyl-1,2,3,4,4a,9,9a,10-Octahydroanthracenes—M. M. Shemyakin, M. N. Kolosov, M. G. Karapetyan, Hsieh Yu-yuan, and V. V. Onoprienko . . . . .	953	1024
Chemical Investigation of <i>Schizandra chinensis</i> . Communication 4. Isolation, Structure, and Synthesis of Deoxyschizandrin, and the Structure of $\gamma$ -Schizandrin—N. K. Kochetkov, A. Ya. Khorlin, and O. S. Chizhov. . . . .	963	1036
Study of a Regular Polypeptide Isomorphous to Collagen and Containing the Sequence Glycyl-Prolyl-Hydroxyprolyl—V. A. Shibnev and V. G. Debabov . . . . .	969	1043
Synthesis of a Hexapeptide with the Amino Acid Sequence of the Pseudocrystalline Portion of the Collagen Molecule—V. A. Shibnev, V. G. Debabov, and G. A. Baulina. . . . .	975	1049
$\beta$ -Dicarbonyl Compounds. Communication 20. Reaction of 2-(Alkylaminomethylene)Cyclo-Hexanones with Hydrogen Peroxide—L. P. Vinogradova, G. A. Kogan, and S. I. Zavyalov. . . . .	979	1054
Stereochemistry of Nucleophilic Additions to the Carbonyl Group. Communication 6. Reactions of 3-t-Butylcyclohexanone—A. M. Prokhoda, A. V. Kamernitskii, and A. A. Akhrem . . . . .	984	1060
Inhibitors of Free-Radical Reactions. Communication 5. Synthesis of 3,5-Dialkyltyrosines—G. A. Nikiforov and K. M. Dyumaev . . . . .	991	1068
Hydrogenolysis of Cyclopentane Hydrocarbons in Presence of Platinum Deposited on Silica Gel—i. V. Gostunskaya, Kuo Ch'ing-feng, and B. A. Kazanskii. . . . .	995	1073
Catalytic Transformations of Cyclopentane and Its Homologs in Presence of Platinum Deposited on Aluminum Silicate—Kuo Ch'ing-feng, I. V. Gostunskaya, and B. A. Kazanskii. . . . .	999	1078
Effect of Pressure on Structural and Steric Orientation in Diene Synthesis. Communication 1. Condensation of 1-Vinylcyclopentene with Methyl Acrylate—B. S. El'yanov, B. A. Rudenko, M. G. Gonikberg, and V. F. Kucherov . . . . .	1003	1082
Highly Unsaturated Polymers. Communication 9. Synthesis and Polycondensation of Diacetylenic Derivatives of Phenanthrene—L. B. Fisher, I. L. Kotlyarevskii, E. S. Domnina, and Z. P. Trotsenko. . . . .	1009	1090
Structure of Product of the Polymerization of Silvan in Presence of a Complex Organometallic Catalyst—Yu. Ya. Gol'dfarb, I. L. Kershenbaum, and M. V. Shishkina. . . . .	1013	1095
BRIEF COMMUNICATIONS		
On the Character of the Interaction of Stannanols with Iotich Reagent—M. F. Sostakovskii, N. V. Koniarov, V. K. Misyunas, and M. K. Zainchkovskaya. . . . .	1018	1102
Dependence of the Surface Tension of Thallium Sulfide on the Temperature—V. B. Lazarev and M. N. Abdusalyamova . . . . .	1021	1104
Synthesis of Biquaternary Ammonium Derivatives of Decamethylenediamine—A. I. Lopushanskii, A. K. Gorban', and V. V. Udovitskaya. . . . .	1023	1106
On the Mechanism of the Oxidation of Cyclohexanone—E. T. Denisov and L. N. Denisova . . . . .	1025	1108
Influence of Pressure on the rate of Nucleophilic Aromatic Substitution—M. G. Gonikberg and N. I. Prokhorova . . . . .	1028	1110
Investigation of the Thermal Transformation of Polyacrylonitrile by the Method of Photoconductivity—I. A. Drabkin and L. D. Rozenshtein . . . . .	1031	1113
Variation of the Selectivity of the Action of a Nickel Catalyst in the Process of Hydrogenation of Crotonaldehyde—N. V. Borunova, L. Kh. Freidlin, and L. I. Gvinter. . . . .	1034	1115
On the Catalytic Transformation of Furan Amines to 2,4-Dialkylpyrroles—I. F. Bel'skii, N. I. Shuikin, and G. E. Skobtsova. . . . .	1037	1118
Synthesis of 2,5-Dialkylpyrrolidines by Conjugated Catalytic Hydrogenolysis of Furan Amines—N. I. Shuikin, I. F. Bel'skii, and G. E. Skobtsova. . . . .	1040	1120

(Continued)

Available From Consultants Bureau



## CONTENTS (continued)

	P A G E	
	ENG.	RUSS.
A New Stable Radical of the Indole Class, 2,2,4,4-Tetramethyl-1,2,3,4-Tetrahydro- $\gamma$ -Carboline-3-Oxyl—É. G. Rozantsev and A. B. Shapiro . . . . .	1043	1123
Investigation of the Vibrational Spectra of Certain Organosilicon Acetylenic and Diacetylenic Compounds—M. F. Shostakovskii, N. I. Shergina, N. V. Komarov, É. I. Brodskaya, and I. I. Igonina . . . . .	1046	1126
Synthesis of Trialkyltetrahydrofurans by the Method of Catalytic Isomerization of $\gamma$ -Tetrahydrofurylalkanols—N. I. Shuikin, I. F. Bel'skii, and Z. K. Vol'nova . . . . .	1049	1128
LETTERS TO THE EDITOR		
Reaction of 1-Vinyl- $\Delta^{1(9),5(10)}$ -Hexalone-6 with 8-Dicarbonyl Compounds N. N. Gaidamovich and I. V. Torgov . . . . .	1052	1131
On the Formation of a Polymeric Chelate Compound of Tetracyanoethylene—A. I. Sherle, Yu. G. Aseev, E. L. Frankevich, A. A. Berlin, and V. I. Kasatochkin . . . . .	1053	1132
Unusual Influence of Pressure on Radical Polymerization—V. M. Zhulin, R. I. Baikova, and M. G. Gonikberg . . . . .	1054	1133
Telomerization of Silicacyclobutanes—N. S. Nametkin, V. M. Vdovin, and P. L. Grinberg . . . . .	1055	1133
Nucleophilic Addition of the Magnesium Complex of Nitroacetic Acid—V. M. Belikov and Yu. N. Belokon'. . . . .	1056	1134
Sulfuration and Mercuration of Cyclopentadienylrhenium Tricarbonyl—A. N. Nesmeyanov, N. E. Kolobova, K. N. Anisimov, and L. I. Baryshnikov . . . . .	1057	1135
CHRONICLE		
Annual Session of the General Meeting of the Department of General and Technical Chemistry . . . . .	1058	1136

Available From Consultants Bureau

Izvestiya VUZov: Instrument Building  
Vol VIII, No 1, 1965

Following is a translation of the Russian-language  
journal Izvestiya Vysshikh Uchebnykh Zavedeniy  
MVISO SSSR (News of Higher Educational Institutions,  
Ministry of Higher and Secondary Specialized Education,  
USSR) Priborostroyeniye (Instrument Building), Vol VIII,  
No 1, (Jan-Feb), 1965, Leningrad, pp 3-191.

Table of Contents

	<u>Page</u>
Golubev, P.M. The Effect of Coherent AM Interference on the Accuracy of Range Measurement by a Phase Range-Finding Radar...	1
Mkrtchyan, A.S. Investigation of the Passage of Pulsed Signals Through an Electronic Switch .....	5
Karpov, R.G. and Shapkin, B.D. An Electronic Phase Inverter.....	13
Fremke, A.V., et al. A Static Converter of the Values of Active Power with the Use of Nonlinear Semiconductor Resistances.....	19
Fateyev, A.V., et al. A Device for Measuring the Temperature of Rotating Bodies.....	27
Dushin, Ye. M. and Artem'yev, V. Ya. Measuring AC and Voltage Converters with a Unified Output Signal.....	35
Kol'tsov, A.A. and Valeyeva, G. Kh. Analysis of One Measuring Circuit for Automatic Electronic Potentiometers Measuring Temperature.....	41
Kontorovich, V.P. On the Problem of Evaluating the Reliability of Measurement.....	48
Glazenko, T.A. Semiconductor Inverters with Pulse-Width Modulation for Electric Drive Systems.....	53
Funtov, N.M., et al. Comparative Evaluation of Several Methods of Conversion of a Single Electrical Signal into a Series of Discrete Values.....	66
Alimov, I.D. Concerning the Possibility of Connecting Two Independent Servo Systems in One Common Amplifier.....	77

(Continued)

Available From JPRS 30110

	<u>Page</u>
Yarmosh, N. Ya. and Goncharova, V. K. Magnetic Pulse Decoder for the BPM-20 Control Arrangement.....	84
Drozdov, V.N. The Operation of a Switching Phase Discriminator for Square-Pulse Voltages.....	95
Chernysheva, L.V. Two-Channel Input Information System for the "Ural-1" for Computing the Correlation Relationships between Empirical Sequences.....	100
Rudnev, Yu. P. An Adder Using Amplitude Coding of Bit Weights in the Through-Carry Circuit.....	109
Posnov, N.N. Decimal Accumulator Adder Without Carry Propagation.	121
Nagornyy, L. Ya. and Il'nitskiy, L. Ya. Generalized Parameters of Differentiating and Integrating Systems.....	133
Bogdanovich, M.M. Effect of the Accelerations of an Object on the Accuracy of the Readings of the Gyroazimuth.....	148
Bessonov, A.G. Basic Mutual Connections of the Design and Aerodynamics of Gyromotors.....	157
Chelpanov, I.B. Synthesis of the Dynamic Characteristics of Systems for Conversion of Navigational Data for a Control Regime.....	171
Budnyatskiy, I.M. and Lunts, Ya. L. Drifts of a Dynamically Unbalanced Gyroscope Installed on an Oscillating Base.....	177
Kargu, L.I., et al. On the Systematic Drift of a Free Gyroscope.	184
Torochkov, V. Yu. On the Problem of Preserving a Horizontal Position of the Platform During Banking.....	189
Aksel'rod, Z.M. Concerning the Theory of Contactless Electric Clocks.....	193
Ivanov, A.V. Investigation of Frequency Acceleration Pickups with Mechanically Concentrated Parameters.....	201
Mokeyev, I.I. The Dynamometer System of N.G. Tokar' for Alternating Cyclical Loads.....	209
Smitriyev, A.P. Preliminary Calculation of Three-Component Variable-Magnification Systems.....	214
Sergeyev, O.A. On the Structure of the Ground Surface of Optical Glass.....	222
Garachk, V.K. and Nayer, V.A. Semiconductor Thermoelectric Coolers of Transistors.....	-
Zaks, D.I. Thermal Conditions of Point-Contact of Solid-State Circuit.....	235
Valitov, A. M.-Z.. Concerning the Modernization of One-Spindle Automatic Turret Lathes Applicable to Conditions of Small-Series Production.....	240

Available From JPRS 30110

Izvestiya VUZov: Radiophysics  
Vol VII, No 6, 1964

Following is a translation of the Russian-language Journal Izvestiya Vysshikh Uchebnykh Zavedeniy MVISSO SSSR (News of Higher Educational Institutions, Ministry of Higher and Secondary Specialized Education, USSR) Radiofizika (Radiophysics series), Vol VII, No 6, (Nov-Dec), 1964, Gor'kiy, pp 1021-1232.

Note: Illustrations and author's English summary are given at the end of each article.

Table of Contents

	<u>Page</u>
Kuz'min, A.D. The Venus Model with a "Cold" Absorbing Atmosphere.....	1
Braude, S.Ya. and Vagsberg, V.V. On the Low-Frequency Spectrum of Cosmic Radio-Emission.....	17
Ginzburg, E.I. On the Propagation of Strong Radio-Waves in the Ionosphere.....	30
Kravtsov, Yu. A. Asymptotic Solution of the Maxwell Equations Near the Caustic Surface.....	40
Tamoykin, V.V. On the Radiation from a Charge Moving Through a Medium with Fluctuating Parameters.....	51
Alekseyev, G.A. and Bliokh, P.B. Coherent Bremsstrahlung of Extended Electron Clusters.....	61
Tsaregradskiy, V.B. On the Theory of Molecular Generator Fluctuations.....	75
Yashkov, V.Ya. Application of the Methods of Statistical Radiophysics to the Study of the Movement of the Earth's Poles.....	95
Milovskiy, N.D. On the Steady-State Mode of an Optical Quantum Traveling-Wave amplifier with Feedback.....	103

(Continued)

Available From JPRS 30060

<u>Table of Contents (continued)</u>	<u>Page</u>
Skrotskiy, G.V. and Pokazanyev, V.G. Energy Spectrum $2^3 S_1$ of the He <sup>3</sup> State in an Arbitrary Magnetic Field.....	118
Skrotskiy, G.V. and Pokazan'yev, V.G. Theory of Optical Orientation in He <sup>3</sup> .....	126
Zhidko, Yu. M. Successive Approximations Method for Constructing Optimum Antenna Arrays.....	140
Ivanov, Ye. A. Field of a Magnetic Dipole Coaxial with Two Disks.....	154
Etkin, V.S. Theory of Modulated Circuits.....	177
Karmanova, Ye. S. and Etkin, V.S. Theory of "Modulator-Demodulator" Type Amplifiers.....	186
Vashkovskiy, A.V. Nonlinear Effects in a Magnetostatic Amplifier and Generator.....	194
Tsoy, K.M. Periodic Oscillations of Quasilinear Self-Contained Delay Systems.....	205
Popov, V.A. Diodeless Ferrite Unit with Bridge Coupling.....	219

BRIEF REPORTS AND LETTERS TO THE EDITORS

Kamenskaya, S.A. and Stankevich, K.S. Measurement of the Absorption of Radio Waves in Atmosphere at an Altitude of 3,200 Meters Above Sea Level on the 1.6-Centimeter Wavelength.	227
Barsukov, K.A. and Ginzburg, V.L. On the Direction of a Beam and on the Group Velocity in an Absorbing Anisotropic Medium.....	230
Gaylitis, A. and Tsytovich, V.N. On the Theory of Nonlinear Interaction of Longitudinal and Transverse Plasma Waves.....	235
Krasovitskiy, V.B. and Kurilko, V.I. On the Effect of Radiation on the Resonance Acceleration of a Particle in a Plane-Wave Field.....	242
Bass, F.G. and Khankina, S.I. On the Nonlinear Theory of Electromagnetic Waves in Semiconductors and Plasma.....	246
Andreyev, G.A. On the Effect of the Fluctuation in the Transfer Velocity of the Inhomogeneities on Statistical Characteristics of a Wave Propagating in a Turbulent Medium.	251
Makhorin, V.I. and Protsenko, Ye. D. The Divergence of Radiation in a Helium-Neon Laser.....	256
Kopvillem, U. Kh. and Nagibarov, V.R. Resonance Broadening and the Transfer of Energy in Optically Excited Systems with a Discrete Spectrum.....	261
Gryaznov, Yu. M. and Chastov, A.A. The Form of a Sequence of Spin Echoes When Using Pulses not Satisfying the Condition of a 180° Turn.....	265
Umarchodzhayev, R.M. On the Theory of Spin Generators.....	268
Litvinenko, L.N. Diffraction of an Electromagnetic Wave on a Plane Metal Array of Special Configuration with a Dielectric and Screen (The Case of Normal Incidence).....	275

(Continued)

Available From JPRS 30060

<u>Table of Contents (Continued)</u>	<u>Page</u>
Eydmann, V. Ya. On Normal Waves in a Round Waveguide Filled with Plasma When Calculating Spatial Dispersion.....	281
Groshkov, L.M. An Experimental Investigation of a Space Charge in a Cylindrical Magnetron Under Static Conditions...	285
Al'tshuler, Yu. G., et al. An Experimental Investigation of a Traveling-Wave Strophotron.....	294
Klimov, V.V. Tunnel-Diode Cells for Storage Devices with Nondestructive Readout of Information.....	300

INFORMATION

<u>Geomagnetizm i Aeronomiya (Geomagnetism and Aeronomy)</u> , Vol 4, No 4, 1964. Abstracts of interest to the readers of "Radiophysics".....	305
---	-----

Available From JPRS 30060

**Izvestiya VUZov: Radio Engineering**

**- USSR -**

**Vol VII, No 4, 1964**

Following is a translation of the Russian-language Journal Izvestiya Vysshikh Uchebnykh Zaveden'y: Radiotekhnika (News of Higher Educational Institutions: Radio Engineering), Vol VII, No 4, July-August 1964, Kiev, pp 406-542.

Note: Illustrations are given at the end of each article.  
Original source page numbers appear in the left-hand margin of translation.

**TABLE OF CONTENTS**

	<b><u>Page</u></b>
<b>Post, YU.N. Certain Properties and Applications of Dielectric Crystals, in Which the Current is Determined by the Space Charge</b>	<b>1</b>
<b>Karmasinskiy, A.N. Unitron-Coupled Symmetrical Trigger</b>	<b>18</b>
<b>Karmasinskiy, A.N. An Analysis of the Static Operating Conditions of Triggers Coupled Directly With Unitrons</b>	<b>33</b>
<b>Vaganov, V.I. and Pershenkov, V.S. The Inductive Properties of Low-Voltage Dynistors</b>	<b>44</b>
<b>Vaganov, V.I., Pershenkov, V.S., and Stepanenko, I.P. Parallel-Connected Trigger with Low-Voltage Dynistor</b>	<b>54</b>
<b>Vaganov, V.I. and Pershenkov, V.S. Series-Connected Trigger with Low-Voltage Dynistor</b>	<b>72</b>
<b>Volkov, Y U.A. The Build-up Time of the Front in Transistorized Multistage Amplifiers</b>	<b>80</b>
<b>Galitskiy, V.V. Transfer Characteristics of Transistor with Electrical Field Varying Along the Base</b>	<b>87</b>
<b>Rus'min, A.A. Analysing Amplifiers with Distributed Parameters by Taking into Account the Transfer Admittance of the Amplifying Components</b>	<b>97</b>

(Continued)

Available From Joint Publications Research Service 88085

Table of Contents  
(cont'd)

	<u>Page</u>
Kovinskiy, N.A. Two-Circuit Self-Generator of Harmonic Oscillations Using a Tunnel Diode	108
Mekhtantsev, Ye.B. Calculation of Partial Admittances (capacitances) in Certain Two-Dimensional Systems	118
Petrenko, A.I. and Yeliseyev, V.K. Concerning the Electrical Design of Units of Photoelectric Image Translators	127
Tuz, Yu.M. New Method of Calibrating Millivoltmeters for Effective and Average Amplitude Values	137
Murav'yev, V.V. and Shevchenko, V. I. Two-Stage Deceleration in O-type Carcinotrons and Traveling-Wave Tubes	142
<b>BRIEF COMMUNICATIONS</b>	
Franchuk, A.M. Structural Characteristics and Reliability of Ceramic Tube Capacitors	150
Skripnik, Yu.A. and Tolmachev, Ye.S. Concerning the Selection of Modulation Frequency in Measuring Schemes for Periodic Comparison	154
Kalnibelotskiy, Yu.M. Concerning the Calculation of Allowable Current in Germanium and Silicon Gates	159
Boynaka, Yu.A. The Coupling Impedance of Bent Delay Systems	165
<b>EDITOR'S MAILBOX</b>	
Sablin, Ye.S. About the Article by V. V. Chashnik and S.M. Finkel'shteyn entitled: <u>Concerning the calculation of the Transfer-Constant of the Stage of Directional Couplers</u>	172
On the 60-th Anniversary of Vladimir Ivanovich Siferov	177

Available From Joint Publications Research Service 28085



# COLLOID JOURNAL

of the USSR

A translation of KOLLOIDNYI ZHURNAL

a publication of the Academy of Sciences of the USSR

© 1965 CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N.Y.

Volume 26, Number 3

May-June, 1964

## CONTENTS

	PAGE	RUSS. PAGE
Problems in Colloid Science as Related to the Problems of Chemization of Industry and the Intensification of Agriculture . . . . .	227	1
An Analytical Method of Developing Distribution Curves for Polydispersed Suspensions from Dispersed Phase Settling Rates—N. Ya. Avdeev . . . . .	229	273
A Study of the Adsorption of Counter Ions in the Coagulation of Lyophobic Sols by Electrolytes—A. A. Beran, Yu. M. Glazman, and D. N. Strazhesko . . . . .	233	278
Investigation of the Processes of Crystallization and Structuration of Calcium Aluminate Sulfate Hydrate in the Presence of Calcium Oxide. Mechanism of the Destructive Action of Calcium Aluminate Sulfate Hydrate in Cement Concrete—T. K. Brutskus and E. E. Segalova . . . . .	238	284
The Structure of Soaps Modified with Additives of Lead and Aluminum Stearates—V. V. Vainshtok, B. N. Kartinin, and G. A. Gol'der . . . . .	243	290
Electric Conductivity of Plastic Disperse Systems Under Static and Dynamic Conditions—Yu. F. Deine'za, A. M. Vovnenko, and G. V. Vinogradov . . . . .	249	296
The Theory of Evaporation of Liquids from Capillaries—B. V. Deryagin, S. V. Nerpin, and N. V. Churaev . . . . .	253	301
Aqueous Dispersions of Polypropylene—B. A. Dogadkin, A. G. Snezhko, V. E. Gul' . . . . .	259	308
The Stability of Films and Foams, and the Mechanical Properties of Films Made from Solutions of Saponins, Alkylarylsulfonates, and Esters of Sulfonylsuccinic Acid—K. V. Zotova and A. A. Trapeznikov . . . . .	263	312
The Mechanism of the Formation and Crystallization of Aluminum Hydroxide—Yu. M. Kandykin . . . . .	268	318
The Infrared Spectra of an Aerosol with a Chemically Modified Surface—A. V. Kiselev, V. I. Lygin, and I. N. Solomonova . . . . .	273	324
Relationship Between Dichroism and the Degree of Polarization in the Electrooptics of Colloids—V. V. Kurbasov . . . . .	278	330
Effect of the Rigidity of Dynamometric Appliances on the Results of Rheological Measurements—A. I. Leonov, A. Ya. Malkin, and G. V. Vinogradov . . . . .	283	335
Investigation of the Formation of Supersaturated Solutions in the Hydration of $\beta$ -Dicalcium and Tricalcium Silicates in Dilute Aqueous Suspensions—E. E. Segalova, O. I. Luk'yanova, and Chou Ping-i . . . . .	288	341

(Continued)

Available From Consultants Bureau

KOLLOIDNYI ZHURNAL  
Vol XXVI, No 3, May, Jun 1964

CONTENTS (Contd)	PAGE	RUSS. PAGE
The Relationship Between the Structure of Surface-Active Substances and Their Adsorptive Properties. 2. Esters of Sulfo succinic and Sulfo propionic Acids (Na-Salts)—O. K. Smirnov and S. M. Levi. . . . .	296	350
Activation of Pigments by Surface-Active Substances and Structuration in Solutions of Film-Forming Polymers—A. B. Taubman, S. N. Tolstaya, and S. S. Mikhailova. . . . .	301	356
Interaction of Polymers with Plasticizers. 5. Adhesion Ability of Polyvinyl Chloride Plasticizers and Their Influence on the Properties of Rubber Existing in Contact with Them —E. G. Fedoseeva, R. I. Fel'dman, and S. I. Sokolov. . . . .	306	362
Differentiation of Water According to the Forms of the Bond in Cement Stone —Yu. V. Chekhovskii, V. É. Leirikh, and V. M. Kazanskii. . . . .	310	367
Hydration and Formation of Hardening Crystallization Structures in Concentrated Suspensions of $\beta$ -Dicalcium and Tricalcium Silicates—Chou P'ing i, E. E. Segalova, and O. I. Luk'yanova. . . . .	315	373
Sedimentation Analysis of Disperse Systems with Continuous Recording of the Weight of the Deposit Accumulated in the Centrifugal Field—L. I. Edel'man and G. S. Khodakov. . . . .	321	380
Use of Nuclear Magnetic Resonance for Determining the Moisture Content of Disperse Systems and the Properties of Bound Water (Review)—M. P. Volarovich and A. I. Shchukin. . . . .	326	386
Magneto-Optical Effects in a Magnetite Sol—E. E. Bibik and I. S. Lavrov. . . . .	331	391
Anomalous Velocity of Ultrasonic Waves in Feat of 80-90% Moisture Content —M. P. Volarovich, G. I. Kuzhman, and A. I. Yashchenko. . . . .	333	392
Evaluation of the Strength of Adhesion of Spherical Dielectric Particles to Metal Surfaces —B. V. Deryagin, Yu. P. Toporov, and I. N. Aleinikova. . . . .	335	394
The Adhesive Force Between some Resins and Clays—N. I. Maksimova, N. I. Titkov, and A. S. Korzhuev. . . . .	337	396
Micelle Formation in Soap Solutions—L. A. Shits. . . . .	339	397

Available From Consultants Bureau

# METALLURGIST

A translation of **METALLURGO**

Published by  
the Board of Governors of *Acta Metallurgica*.  
Distributed by Consultants Bureau

CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N.Y.

Numbers 5-6

May-June, 1964

## CONTENTS

	P A G E	
	ENG.	RUSS.
NUMBER 5, 1964		
"Metallurgy" Pavilion in the Exposition of Achievements in the National Economy.		
<u>A. Boyarshinov</u> . . . . .	217	1
Everything for Chemistry, Everything from Chemistry . . . . .	219	3
On the Limits of Forcing Blast-Furnace Smelting. <u>I. G. Tovarovskii, M. A. Sukonnik,</u> <u>R. D. Kamenev, V. N. Kozub, and G. B. Rabinovich</u> . . . . .	222	5
Obtaining High-Quality Iron by Treatment Outside the Blast-Furnace. <u>A. I. Vinogradov,</u> <u>M. N. Boldyrev, G. A. Perepelkin, P. A. Serin, I. M. Tarasov, and I. I. Zlochevskii</u> . . . . .	227	9
Shortcomings in the Equipment of Blast-Furnaces of 2000-m <sup>3</sup> Capacity. <u>V. K. Varfolomeev</u> . . . . .	230	12
CHRONICLE, EVENTS, FACTS		
Determination of Carbon Content in 50 sec. . . . .	233	14
Fertilizer from Slag. . . . .	233	14
No Storing Necessary . . . . .	233	14
STEEL		
Production of Steel 14GN in the 370-T Open Hearth Furnace. <u>G. N. Kamyshev</u> <u>and G. G. Alekseenko</u> . . . . .	234	15
Breakage of Stopper Heads. <u>O. V. Trifonov and N. K. Gorokhov</u> . . . . .	236	16
Creating Metal. <u>R. Abubakirov</u> . . . . .	240	20
Determination of the Optimal Frequency of Reversing the Flame of Open-Hearth Furnaces. <u>N. K. Korneva, G. A. Dorofeev, I. P. Grinevich, and E. B. Vinokurov</u> . . . . .	241	22
Rammed Refractory Lining of the Walls of the Upper Structure of Open-Hearth Furnaces. <u>K. I. Kozat</u> . . . . .	243	23
IN THE STEELMAKING SHOPS OF THE COUNTRY		
A Hydraulic Explosive Method for Smashing Molds. <u>A. F. Krasov</u> . . . . .	244	24
Measuring Bin for Introducing Deoxidizers into the Ladle. <u>P. A. Kuprin</u> . . . . .	245	24
An Improved Sprayer. <u>D. L. Isakovich</u> . . . . .	246	25
Bricking of the Roof of Open-Hearth Furnaces Without Side Metal Plates. <u>P. A. Kuprin</u> . . . . .	247	26
ABROAD		
Open-Hearth Furnace Hearth Made from Carbonaceous Blocks. <u>A. Lekhtic</u> . . . . .	248	26

(Continued)

Available From Consultants Bureau

**METALLURG**  
No 5, 6, 1964

**CONTENTS (Contd)**

	<b>P A G E</b>	
	<b>ENG.</b>	<b>RUSS.</b>
<b>ROLLING</b>		
The Introduction of Advanced Methods of Planning and Calculation of the Output of Economic Forms of Rolled Product. <u>I. G. Bukhvostov</u> . . . . .	249	27
Production of Seamless Bimetallic Tubes. <u>V. S. Smorshchov</u> . . . . .	252	29
Determination of the Readiness of Ingots for Rolling. <u>P. Baranovskii</u> . . . . .	255	31
Durability and Life of Rolling-Mill Rolls. <u>M. A. Benyakovskii, L. I. Butylkina, A. F. Nasibullin, and O. A. Mel'nikov</u> . . . . .	257	32
Small Induction Heating Unit for Rolls Before Placement in the Stand. <u>L. M. Logvinov</u> . . . . .	258	33
Knurling of the Sloped Areas of Roll Grooves by a Disk Knurling Tool. <u>M. D. Aizenshtein, E. A. Demidovich, and A. G. Koba</u> . . . . .	261	34
New Designs for the Housing of Working Stands. <u>A. N. Bibikov and V. P. Lepin</u> . . . . .	262	35
"Élekrostal'" Plant. <u>S. Yarushkin</u> . . . . .	264	38
<b>FROM THE HISTORY OF TECHNOLOGY</b>		
From Superstition to Knowledge. <u>V. A. Brandt</u> . . . . .	265	39
<b>NUMBER 6, 1964</b>		
For Large-Scale Mechanization and Extensive Automation of the Metallurgical Industry . . . . .	268	1
Pneumatic Loading of Coke into the Ignition Furnace of the Sintering Machine. <u>M. L. Chekanovskii, N. V. Pribavin, N. G. Kamkin, P. A. Yudin, and A. P. Smirnov</u> . . . . .	274	4
Mechanization of Subsidiary Jobs in the Sintering Plant. <u>V. A. Kozlov</u> . . . . .	276	5
Forcing of Blast-Furnace Smelting when Operating with Combined Blast. <u>M. D. Zhembus, V. V. Poltavets, and K. I. Kotov</u> . . . . .	280	9
A Unit for Loosening Frozen Bulk Loads. <u>Yu. A. Noskov, S. F. Matalasov, and V. I. Chernyaev</u> . . . . .	284	12
On the Economical Efficacy of Automating Oxygen-Converter Production of Steel. <u>I. A. Zaitsev and M. M. Pischikov</u> . . . . .	287	14
Automatic Regulation of the Combustion Process. <u>V. S. Kocho, V. I. Grankovskii, and V. K. Lisitsa</u> . . . . .	289	15
An Integral-Motor Time Relay for Switching the Valves. <u>A. P. Bezrukov and V. S. Gritskov</u> . . . . .	291	17
Mechanization of the Removal of Dust from the Arches of Open-Hearth Furnaces. <u>A. N. Gorodetskii, A. M. Robustov, L. M. Arist, and A. I. Shcherbin</u> . . . . .	293	18
A Mechanized Unit for Grinding Magnesite Powder. <u>I. F. Parfent'ev, I. B. Parimonchik, and N. P. Gubskii</u> . . . . .	295	19
An All-Union Forum of Steel Workers. . . . .	297	20
Remote Control of Cranes. <u>É. M. Pol'skii and A. I. Gurkov</u> . . . . .	300	22
<b>ROLLED PRODUCTS</b>		
Automation of the Auxiliary Mechanisms of the Reelers of the 250-1 Tube-Rolling Unit. <u>G. A. Osipov</u> . . . . .	301	23
A Device for Measuring the Surface Temperature of Ingots. <u>G. L. Bruns, E. F. Gavrilin, and V. Ya. Spozhnikov</u> . . . . .	304	25
Control of the Covers of Soaking Pits at Blooming Mills. <u>V. P. Kukhta</u> . . . . .	307	27
Mechanization and Automation of Scarfing Slabs. <u>V. M. Fainshtein</u> . . . . .	309	28
<b>FOR LABOR SAFETY</b>		
Automatic Control of Illumination of Shops. <u>A. N. Lebed'</u> . . . . .	314	33
Tales about Metals. . . . .	316	36
Metal-Vitamin. <u>S. Venetskii</u> . . . . .	317	36

(Continued)

Available From Consultants Bureau

METALLURG  
No 5, 6, 1964

**CONTENTS** (continued)

	P A G E	
	ENG.	RUSS.
CREATIVE THINKING		
Mechanization and Automation of Industrial Processes. <u>V. Zel'tser and A. Batmanov</u>	320	38
Chronicle-Events-Facts . . . . .	321	38
Achievements of Science and Technology-To the National Economy. <u>S. Rigmant</u> . . . . .	322	39

Available From Consultants Bureau

# METALLURGIST

A translation of METALLURG

Published by  
the Board of Governors of Acta Metallurgica.  
Distributed by Consultants Bureau

CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N. Y.

Numbers 7-8

July-August, 1964

## CONTENTS

	P A G E	
	ENG.	RUSS.
<b>NUMBER 7, 1964</b>		
The Fight for Metal. <u>I. I. Kostyukov</u> . . . . .	327	1
Metallurgy-Chemistry. <u>V. V. Lempitskii</u> . . . . .	330	3
Realization of the Resolutions of the December and February Plenums of the CC of the CPSU. <u>A. Storozhev</u> . . . . .	333	5
Towards Further Improvement of the Labor Conditions of Metallurgists. <u>A. P. Rudnev</u> . . . . .	335	6
Operation of Blast-Furnaces with Air Tuyeres of Increased Diameter. <u>A. A. Malyshev</u> . . . . .	338	8
Forcing the Pace of Blast-Furnaces with Increase in the Diameter of the Air Tuyeres. <u>I. I. Pushkash, B. L. Lazarev, and I. A. Tatsienko</u> . . . . .	341	10
A New Design of a Selector of Air Pressure of the Nozzle. <u>S. T. Rusin</u> . . . . .	344	12
Furnace Attendant Mikhail Sergeevich Khren'. <u>M. Gladkii</u> . . . . .	346	14
<b>STEEL</b>		
The First 100-Ton Rotating Converter in the USSR. <u>I. M. Birinberg, A. A. Perimov,</u> <u>and N. I. Perlov</u> . . . . .	348	15
Repair of Open-Hearth Tapholes. <u>A. S. Freidenberg, E. I. Dikshtein, A. G. Trifonov,</u> <u>M. P. Artamonov, A. R. Vorogov, V. I. Shakhlin, and A. F. Tarasov</u> . . . . .	353	19
<b>ROLLED PRODUCTS</b>		
On the Problem of Producing Welded Casing Pipes. <u>V. I. Fedorov</u> . . . . .	357	24
Acceleration of the Production of Pipes with Metallic and Nonmetallic Coatings. <u>I. A. Doroshev</u> . . . . .	358	25
Improvement in the Roll-Pass Design of Continuous Billet Mills. <u>N. V. Skorkin</u> <u>and M. Ya. Brovman</u> . . . . .	360	26
Relationship Between Sheet Profile and Cambering of Rolls. <u>L. I. Borovik, I. F. Pedos,</u> <u>A. F. Pimenov, and P. P. Shapovalov</u> . . . . .	362	28
A Unit for Grinding Billets. <u>E. I. Dorokhin and V. M. Zharkov</u> . . . . .	364	30
The Working Experience of Roller-Guider <u>N. N. Tsvetkov</u> . <u>P. Evseev</u> . . . . .	366	31
The Metallurgical Industry of Azerbaidzhan—the Child of Soviet Power. <u>M. B. Tagiev</u> <u>and N. G. Mamedov</u> . . . . .	368	32
Advanced Methods Should be Propagated to Every Worker. <u>B. Sergeev</u> . . . . .	371	34

(Continued)

Available From Consultants Bureau

METALLURG  
No 7, 8, 1964

CONTENTS (continued)

	P A G E	
	ENG.	RUSS.
FROM THE HISTORY OF TECHNOLOGY		
"Impossible to Find Better Iron". <u>N. Mezenin</u> .....	441	36
TALES ABOUT METALS		
Giving Light. <u>S. Venetski</u> .....	444	38
NEW BOOKS		
A Needed Book. <u>A. N. Nellinger and S. I. Labadin</u> .....	446	40

Available From Consultants Bureau

**METALLURG**  
No 7, 8, 1964

CONTENTS (Contd)

	P A G E	
	ENG.	RUSS.
Learning Second and Related Occupations. <u>M. Kh. Liberman</u> .....	373	35
The Creative Reserves of Innovators at the "Elektrostal'" Plant. <u>F. Stadnik</u> .....	376	37
FOR METAL ECONOMY		
Let Us More Boldly Introduce Substitutes for Nonferrous and Ferrous Metals. <u>I. G. Vendrov</u> and <u>L. B. Boguslavskii</u> .....	378	38
Leading Production Workers-Participants of the Exhibit of the Achievements of the National Economy .....	381	Insert
NUMBER 8, 1964		
On Obtaining High-Quality Metal. <u>M. A. Pertsev</u> .....	388	1
Intensification of the Quality Control of Metal. <u>F. L. Rabinovich</u> .....	391	3
Experience of the Masters in Producing Iron with a Low Sulfur Content. <u>L. Yu. Ryabtsev</u> and <u>V. I. Vier</u> .....	394	5
The Use of High-Sulfur Coal Oil in Blast-Furnace Smelting. <u>Yu. A. Lekontsev</u> , <u>A. A. Miroshnichenko</u> , and <u>G. G. Pashkeev</u> .....	397	7
The Effect of the Granulometric Composition of the Charge on the Formation of the Burden Surface of Materials in the Furnace. <u>G. I. Fedorenko</u> .....	399	9
Seminar on the Process of Coke Combustion in the Blast-Furnace .....	402	11
The Production of Chemically Sealed Steel. <u>G. S. Kolganov</u> , <u>I. P. Zhuravlev</u> , <u>N. M. Korkoshko</u> , <u>V. M. Servetnik</u> , and <u>N. P. Tarapurov</u> .....	405	13
The Conservation of Ferroalloys during Steel Production in Electric Furnaces. <u>V. F. Smolyakov</u> and <u>E. I. Moshkevich</u> .....	408	15
Accelerated Teeming and the Quality of Rimming Steel. <u>I. A. Tkachenko</u> , <u>A. D. Filatov</u> , <u>A. M. Yzienko</u> , <u>A. K. Gruznov</u> , <u>D. I. Deyneko</u> , <u>V. P. Arychenkov</u> , and <u>B. I. Zayakin</u> ..	411	17
Increasing the Durability of the Lower Structure of Open-Hearth Furnaces. <u>V. G. Senin</u> , <u>A. A. Dobrokhotoy</u> , and <u>K. V. Ryabitshev</u> .....	413	19
Daily Attention to Electroslag Melting. ....	415	21.
ROLLED PRODUCTS		
Production of Lined Tubes. <u>Z. A. Grinberg</u> .....	417	22
Causes of Increased Brittleness of Electrical Steel Sheets. <u>V. G. Borisenko</u> , <u>S. A. Boshko</u> , <u>S. A. Gepps</u> , <u>I. D. Zaidman</u> , and <u>L. B. Gamedova</u> .....	421	25
Weldability of Cold-Rolled Strip During Annealing. <u>A. A. Zhdanov</u> , <u>V. P. Volegov</u> , and <u>Yu. V. Shilkin</u> .....	424	27
Effect of the Heating Conditions of Billets on the Appearance of Skins on Tubes. <u>L. N. Okiei</u> , <u>I. V. Chkhartishvili</u> , <u>I. S. Zhordaniya</u> , and <u>T. K. Berishvili</u> .....	426	29
Economic Effect of Improving the Operating Properties of Guide Units. <u>E. S. Sapiro</u> .....	428	30
Reduction of Flaws When Rolling Billets of Free-Cutting Steel. <u>B. M. Ilyukovich</u> .....	430	31
Improvement in the Surface Quality of Slabs in Rolling. <u>V. P. Emel'yanov</u> .....	431	32
NEWS ITEMS-EVENTS-FACTS		
Metal in Space .....	432	32
Effective Heat Insulation Material .....	433	32
Benefits of Chemistry .....	434	32
FOR LABOR SAFETY		
Prevention of Gas Explosions at Metallurgical Plants. <u>P. Vernigor</u> .....	435	33
To New Frontiers of the Seven-Plan. <u>G. Brodskii</u> .....	437	34
The XIV National Congress of the Trade Union of Metal Workers of Piom of Italy. <u>I. Novitkov</u> .....	439	35

(Continued)

Available From Consultants Bureau



# MICROBIOLOGY

A translation of (MIKROBIOLOGIYA)

A publication of the Academy of Sciences, USSR

© 1968 CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N.Y.

Volume 33, Number 3

May-June, 1964

## CONTENTS

	P	A	R	E
	ENG.			RUSS.
Utilization of Hydrogen Sulfide and Organic Compounds by the Green Sulfur Bacterium <i>Chloropseudomonas ethylicum</i> at Different Light Intensities - V. N. Shaposhnikova and R. M. Balitskaya . . . . .	343			385
Factors Affecting Sterol Biosynthesis in Yeasts - R. D. Gal'tsova and I. P. Bakina . . . . .	347			390
Influence of Nitrogen Compounds on the Growth of Blue-Green Algae and their Fixation of Molecular Nitrogen - Mohamed Semeh Taha . . . . .	352			397
"Active" CO <sub>2</sub> Formation in Cultures of <i>Aspergillus niger</i> - S. A. Barinova . . . . .	359			404
Influence of Oxidation-Reduction Conditions on the Formation of Vitamin B <sub>12</sub> by Propionic Acid Bacteria - A. Kramli and L. I. Vorob'eva . . . . .	363			408
Utilization of Ammonium Salts by the Yeast <i>Candida tropicalis</i> - V. L. Kretovich and T. L. Auerman . . . . .	369			415
Luminescence and Activity of Oxidative Enzymes of Luminescent Bacteria - R. I. Chumakova and A. A. Egorova . . . . .	376			423
Utilization of Organic Acids by Some Ammonificators - E. N. Disler . . . . .	380			428
Vitamin Requirements of Thermophilic Bacteria - L. P. Naidenova . . . . .	385			434
Electronmicroscopic and Cytochemical Study of Mitochondria Isolated from Yeast - V. I. Biryuzova, R. A. Zvyagil'skaya, M. N. Malatyan, and T. M. Volkova . . . . .	392			442
Increased Accumulation of Metachromatin in the Mycelium of Some Ultraviolet-Induced Mutants of <i>Aspergillus niger</i> - N. M. Verbina . . . . .	398			447
Protrusions on the Surface of Spores of Anaerobic Bacteria of the Genus <i>Clostridium</i> - N. A. Krasil'nikov, V. I. Duda, and A. A. Sokolov . . . . .	404			454
Luminescent Microscopic Study of the Structure of Actinomycetes - M. N. Poglasova . . . . .	411			459
Certain Data on Sporulation Obtained by Means of Time-Lapse Cine-Photomicrography - M. A. Peshkov and I. A. Shadrina . . . . .	415			463
The Effectiveness of Using <i>Azotobacter</i> in a Joint Application with Mineral Fertilizers on Rice Crops - Sh. T. Shende and L. M. Kokorina . . . . .	419			467
Influence of Blue-Green Algae on the Growth of Soil Microorganisms - G. N. Perminova . . . . .	424			472
Actinomycetes Antagonistic to the Causal Agent of Cotton Wilt - S. M. Khodzhibaeva and I. Tokhtamuratov . . . . .	428			477
On the Bacteriological Diagnosis of Infection in <i>Dendrolimus sibiricus</i> TSCHTV. Caterpillars During Septicemia Induced by <i>Bac. dendrolimus</i> TALALAEV - S. N. Tyumenets . . . . .	433			483

(Continued)

Available From Consultants Bureau

## CONTENTS (continued)

	P A G E	
	ENG.	RUSS.
Efficiency of Chemosynthesis in Kuibyshev Reservoir Water — M. A. Salmanov. . . . .	437	487
A Comparative Study of the Main Types of Microflora of Dagestan Lakes — L. A. Aliverieva . . . . .	443	494
The Distribution of Yeast Organisms in the Oceans of the World — N. N. Kirikova. . . . .	450	501
Cultivation of Green Planktonic Algae on Sewage — G. G. Vinberg . . . . .	456	508
The Use of Actinophage in the Inducing of a Phage Resistant Strain of an Erythromycin Producer — T. S. Il'ina and V. G. Zhdanov. . . . .	462	516
Physiological-Biochemical Characteristics of Aroma Producing Cultures of <i>Streptococcus diacetylactis</i> — A. P. Chuzhova, L. N. Shubina, M. V. Zalaxhko, and N. V. Makar'ina. . . . .	467	522
Production of Vitamin B <sub>12</sub> by <i>Act. olivaceus</i> on Some Industrial Wastes — I. V. Konova, L. L. Lisenkova, G. Ya. Kalmykova, and I. V. Ulezlo. . . . .	472	528
Preparation of Material for Paper Chromatographic Assay of Volatile Fatty Acids Produced by Yeasts — M. V. Fateeva. . . . .	477	533
A New Method for Preparing Specimens of Microorganisms for the Electron Microscope — I. B. Pavlova and L. N. Kats . . . . .	480	537
Current Ideas on the Mechanism of Biological Fixation of Molecular Nitrogen — I. D. Ivanov, T. K. Il'ina, and Yu. P. Sitonite . . . . .	483	540
<b>REVIEW</b>		
N. N. Zhukov-Verezhnikov and A. P. Pekhov. Bacterial Genetics.—Reviewed by I. I. Olainik and A. A. Sinitskii. . . . .	490	548
A. A. Prokof'eva-Belgovskaya. The Structure and Development of Actinomycetes —Reviewed by L. V. Kalakutskii . . . . .	493	550
<b>CHRONICLE</b>		
The Work of the Moscow Section of the All-Union Microbiological Society, Affiliated with the USSR Academy of Sciences, During 1963. . . . .	497	554
The 80th Birthday and the 55th Anniversary of the Scientific and Pedagogical Activity of Academician V. N. Shaposhnikov — N. S. Egorov. . . . .	499	555

Available From Consultants Bureau

## CONTENTS

(Numbers in parentheses are original Russian page numbers.)

These Russian page numbers are also quoted at the head of each paper.)

Radiation from a Charge Crossing the Boundary between an Isotropic and an Optically Active Medium . . . . .	B. M. Bolotovskii and O. S. Mergelyan	1	(3)
An Approximate Method for Calculating the Hyperfine Interaction Constant . . . . .	S. I. Vetchinkin	4	(10)
Static Current-Voltage and Temperature Characteristics of the Hollow-Cathode Discharge . . . . .	A. N. Shteinberg	7	(16)
Calculation of the Electronic Spectra of Conjugated Heterocyclic Compounds by the DAO Method . . . . .	V. I. Avdeev, N. N. Bulgakov, and N. M. Akimutin	9	(20)
Use of Experimental Data on the Infrared Band Intensities of Isotopic Molecules in Solving the Inverse Electro-Optical Problem . . . . .	L. M. Sverdlov	13	(27)
On the Necessity of Using the First Approximation of the Valence-Optical Theory in Calculations of Electro-Optical Parameters, Intensities and Depolarizations in Raman Spectra of Polyatomic Molecules . . . . .	L. M. Sverdlov and N. I. Prokofeva	16	(33)
Intensities of Infrared Absorption Bands in the Gas Phase and in Solutions . . . . .	A. V. Iogansen, E. V. Broun, and G. D. Litovchenko	18	(38)
Calculation and Interpretation of the Vibrational Spectrum of Pyrimidine . . . . .	V. I. Berezin and S. K. Potapov	22	(45)
A Thermodynamic Treatment of the Process of Photoluminescence . . . . .	Yu. T. Mazurenko	24	(49)
On Temperature Quenching of Luminescence. The Compensation Effect . . . . .	V. P. Kazakov	27	(54)
Excited Dimers of Anthracene Derivatives. I. . . . .	N. S. Bazilevskaya and A. S. Cherkasov	30	(58)
The Quasi-Linear Phosphorescence Spectra of Diphenylene Oxide . . . . .	P. A. Teplyakov and V. V. Trusov	32	(63)
Temperature Dependence of the Hyperfine Interaction Parameters of the F-Center Electron . . . . .	V. Ya. Kravchenko and V. L. Vinetskii	37	(73)
The Relationship between the Thermostimulated Electron Emission, Conduction, and Luminescence of Alkali Halide Crystallophosphors . . . . .	P. A. Pipinis and B. P. Grigas	43	(85)
Thermal Bleaching of Subtractive Coloring Due to Divalent Rare-Earths in Fluorite-Type Crystals . . . . .	V. A. Arkhangelskaya	46	(92)
Luminescence and Photoconductivity Excitation Spectra of TiCl <sub>3</sub> . . . . .	V. A. Sokolov and N. A. Tolstol	49	(98)
A Study of the Relative Localization of Interference Fringes in Transmitted and Reflected Light . . . . .	I. N. Shklyarevskii, N. A. Nosulenko, and A. N. Ryazanov	51	(102)
The Relationship between the Spectra and Molecular Structure of Luminors Used in Scintillators . . . . .	R. N. Nurmukhametov and L. L. Nagornaya	55	(109)
On the Reflection and Absorption of Metallic Films . . . . .	V. V. Lebedeva and I. V. Lebedev	58	(115)
A Bolometer for the Far Infrared . . . . .	M. N. Markov	60	(119)
Optical Activity in the Crystalline State. II. Sodium Uranyl Acetate . . . . .	V. A. Kizel, Yu. I. Krasilov, and V. N. Shamraev	62	(123)

## SHORT COMMUNICATIONS

Calculation of the Finite Aperture and Correction of the Interferogram in Fourier Spectrometry . . . . .	B. N. Grechushnikov, G. D. Shnurev, and I. P. Petrov	66	(130)
--	--	----	-------

(Continued)

Available From Optical Society of America, Inc.

**OPTIKA I SPEKTROSKOPIYA**  
Vol XVIII, No 1, 1965

**CONTENTS (Contd)**

An Investigation of the Spectra and a Determination of the Dissociation Energy of Gallium and Indium Oxygen Compounds . . . . .	L. V. Gurvich, M. M. Novikov, and V. G. Ryabova	68 (132)
Time Resolution of an Optical Shutter with Kerr Cell . . . . .	S. I. Andreev, V. M. Orshelkov, and R. G. Khabirzyalova	70 (135)
Calculation and Interpretation of the Vibrational Spectrum of Pyridazine . . . . .	V. I. Berezin	71 (136)
The Effect of Pre-Irradiation on the Scintillation Properties of NaI(Tl) Crystals . . . . .	Z. B. Baturicheva, N. Yu. Gurevich, and Yu. A. Tsirlin	73 (139)
Determination of the Effective Cross Section of Collisions of the Second Kind between Metastable Neon Atoms and Hydrogen Molecules . . . . .	K. S. Mustafin and N. M. Khashimov	74 (141)
Investigation of the Dissociation Energies of BaO and BaOH . . . . .	L. V. Gurvich and V. G. Ryabova	76 (143)
Excited Dimers of Anthracene Derivatives. II. Dimesoalkylanthracenes . . . . .	N. S. Bazilevskaya and A. S. Cherkasov	77 (145)
On the Relaxation of Non-Equilibrium Carriers in Zinc Sulfide Phosphors . . . . .	Ya. A. Oksman and E. E. Zablovskii	79 (148)
Luminescence of Europium Dibenzoylmethanate under Pulse Excitation . . . . .	P. I. Kudryashov, V. P. Kolobkov, and A. S. Cherkasov	81 (150)
Interpretation of the Vibrational Spectra and Force Constants of Phenol and Phenol-d . . . . .	M. A. Kovner, N. I. Davydova, and I. A. Zhigunova	83 (152)
Effect of Temperature and of the Dissolution of Salts on the Infrared Absorption Bands of Acrylonitrile . . . . .	A. Z. Gadzhiev and I. S. Pominov	84 (154)
Use of Photodissociation and Complex Formation for Inverting the Population of Levels . . . . .	V. G. Plotnikov and V. I. Danilova	86 (156)
Calculation of Coriolis Interaction Constants . . . . .	Yu. I. Ponomarev	87 (158)
Excitation of Vibrations of Diatomic Molecules in the Impact Approximation . . . . .	A. Kh. Mnatsakanyan	89 (161)
Storing of Light Sums in ZnS-Cu, Al in the Process of Electroluminescence . . . . .	V. V. Nuvareva and P. E. Ramazanov	91 (164)
Infrared Absorption of $\text{CHCl}_3$ - $\text{CHBr}_3$ Mixed Crystals . . . . .	Yu. P. Tsyashchenko and L. E. Bankova	93 (167)
Destruction of F Centers by X Rays in Pure and Activated KCl Crystals . . . . .	I. Ya. Melik-Gaikazyan and M. M. Arinshtein	95 (171)
Quadrupole Relaxation in Complex Antimony Trichloride Compounds . . . . .	V. S. Grechishkin and A. D. Gordeyev	96 (172)
Electron Paramagnetic Resonance in Irradiated Chlorates . . . . .	G. I. Subbotin	98 (175)
On the Stimulated Emission of Neodymium in Single Crystals of Lead Molybdate . . . . .	Ya. F. Kariss, M. N. Tolstol, and P. P. Feofilov	99 (177)
The Optical Properties of Magnesium Oxide . . . . .	M. Yu. Sakhnovskii	100 (179)
Sensitizing of the Luminescence of Trivalent Ytterbium by Neodymium in Silicate Glasses . . . . .	V. P. Kovalev and G. O. Karapetyan	102 (182)

Available From Optical Society of America, Inc.

# SOVIET SOIL SCIENCE

A translation of the monthly journal POCHVOVEDENIYE -  
a publication of the V. V. Dokuchayev Institute of Soil Science,  
Academy of Sciences, USSR. A journal founded in 1899.

No. 7, July 1964

Translation printed: April 1965

## CONTENTS

	Page	Russian Page
<b>GENESIS AND GEOGRAPHY OF SOILS</b>		
MAPPING THE CONTENT OF MICROELEMENTS IN THE SOILS OF A KOLKHOZ AND ESTIMATION OF THE EFFECTIVENESS OF APPLYING MICRONUTRIENT FERTILIZERS, by Ya. V. Peyve, P. I. Anspok, G. Zh. Pakaln, T. A. Kononenko-Stepovaya, and A. I. Stepovoy .....	653	1
PODZOLIZATION AND LEACHAGE, by A. A. Rode .....	660	9
USE OF LAND EVALUATION DATA FOR ANALYZING THE AGRICUL- TURAL ACTIVITY OF KOLKHOZES IN THE LATVIAN SSR, by A. Ya. Boruk and R. Ya. Stalbov .....	672	23
GLEYS WEAKLY-PODZOLIC SOILS (Taiga lithogenic gley-podzolized), by D. M. Rubtsov .....	677	28
<b>BIOLOGY AND BIOCHEMISTRY OF SOILS</b>		
BIOLOGICAL ACTIVITY AND THE COMPOSITION OF SOIL AIR IN THE PLOW LAYER, by L. N. Abrosimova and I. B. Revut .....	682	34
BIOCHEMICAL PROCESSES IN VIRGIN AND RECLAIMED PEAT BOG SOILS, by P. F. Golub .....	692	45
THE EFFECT OF GROWING OAK TREES ON THE HUMUS CONTENT IN DARK-CHESTNUT SOILS AND Ciscaucasian Chernozems, by V. A. Mel'chanov .....	700	54
<b>SOIL CHEMISTRY</b>		
STUDY OF THE CATION CONTENT OF THE ADSORPTION COMPLEX OF LOWLAND PEATS, by I. I. Lishitvan, A. M. Mamtola, and N. V. Churayev .....	705	60
FORMS OF PHOSPHATES IN THE SOILS OF THE CENTRAL CHERNOZEM REGION, by P. G. Adrikhina, Ye. P. Tikhova and Ya. G. Charilina .....	712	68
ZINC AND ITS FORMS IN VIRGIN AND OLD IRRIGATED SOILS OF GOLODNAYA STEPPE AND IN COTTON PLANTS, by Ye. K. Kraglova .....	718	75

Available From Soil Science Society of America, Inc.

**POLSKI PRZEGLĄD RADIOLOGII I MEDYCYNY NUKLEARNEJ**  
**Vol XXVIII, No 1, 1964**

**CONTENTS**

	<b>Page</b>
<b>S. Spettowa, J. Kuśmiderski:</b> Angiography of intracranial meningiomas . . . . .	1
<b>S. Miernowski, S. Rudnicki, R. Rajszyś:</b> Comparison of the results of cerebral angiography with the clinical, operative and anatomopathologic diagnosis . . . . .	18
<b>K. Ossowska, L. Pawlicka:</b> Radiologic evaluation of the operative treatment of so-called primary bronchiectases . . . . .	25
<b>S. Joch:</b> Venous racemose angioma of the lung . . . . .	40
<b>E. Kubica:</b> A case of acute "tumor-like" gastritis . . . . .	49
<b>M. Klamut, M. Zakryś:</b> The technique of transcutaneous and transhepatic cholangiography and its clinical applications . . . . .	54
<b>H. Chatys-Skirzyńska, Z. Kamiński, O. Kapuściński:</b> A case of reticulo-sarcoma of the mesentery . . . . .	62
<b>A. Kaczurba:</b> A case of carcinoid of the ileum . . . . .	73
<b>S. M. Shcheglov:</b> On some methods of therapy and prophylaxis of post-radiation complications . . . . .	78
<b>S. Kwieciński, R. Chramowski:</b> The hazard to the patient and personnel of X-rays exposure during stereotaxic procedures on the brain after the method of Guiot and Gillingham . . . . .	88

Available From OTS 64-11415/1

# SOVIET POWDER METALLURGY AND METAL CERAMICS

A translation of **POROSHKOVAYA METALLURGIYA**

publication of the Academy of Sciences of the Ukrainian SSR

(Organ of the Institute of Cermets and Special Alloys,  
Academy of Sciences, Ukrainian SSR)

© 1964 CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N. Y.

Number 2 (14)

March-April, 1963

## CONTENTS

P A G E  
ENG. | RUSS.

### SCIENTIFIC PRINCIPLES OF POWDER METALLURGY

The Kinetics of Comminution of Some Refractory Materials—A. I. Avgustinik, V. Sh. Vigdergauz, V. M. Gropyanov, and G. V. Drozdetskaya. . . . .	95	3
The Sintering of Nitrides of the Transition Metals—G. V. Samsonov and T. S. Verkhoglyadova . . .	98	8
Study of the Sintering of Copper Specimens Compacted From Oxidized Powder —G. I. Aksénov and I. A. Drozdov . . . . .	103	14
Determination of the Degree of Homogenization During Sintering by Microhardness Measurement —S. Yu. Sharivker . . . . .	108	22

### TECHNOLOGY AND PROPERTIES OF POWDERS AND SINTERED PARTS

Investigation of Specific Pressure, Specific Friction, and the Coefficient of Friction During Metal Powder Rolling—A. P. Chekmarev, P. A. Klimenko, and G. A. Vinogradov . . . . .	112	26
The Mechanical Properties of Materials From Iron Powder Obtained by the Reduction of Martite Ore—I. D. Radomysel'skii and V. T. Troshchenko . . . . .	116	32
The Activated Sintering of Soft Magnetic Iron—O. A. Katrus . . . . .	120	38
Microhardness Testing Procedure and Effect of Composition on the Microhardness of Brittle Materials—V. N. Vigdorovich and A. Ya. Nashel'skii . . . . .	123	43
The Corrosion Resistance of Porous Chromium—Nickel Steels—R. A. Andrievskii and V. P. Kopylova . . . . .	127	49
Investigation of the Effect of Temperature on the Electrical and Thermoelectrical Properties of Silicides of Some Transition Metals—V. S. Neshpor and V. L. Yupko . . . . .	131	55
Thermoelectrical Properties of Lanthanum Sesquisulfide—V. I. Marchenko and G. V. Samsonov . . .	135	60

### MATERIAL FROM ALL-UNION INTERINSTITUTE SEMINAR ON PROPERTIES AND METHODS OF PRODUCING REFRACTORY METALS AND THEIR COMPOUNDS

Crystallochemical Peculiarities of Borides, Nitrides, Silicides and Phosphides of Transition Metals. —G. V. Samsonov . . . . .	139	65
Effect of Certain Factors on the Process of Hot Pressing Parts From Silicon—Carbide Based Materials—I. V. Dombrovo, A. A. Kalinina, and V. I. Kudryavtsev . . . . .	150	80
Obtaining Chromium Chloride—N. V. Ageev, F. N. Tavazze, and Yu. M. Kartvelishvili . . . . .	156	88

(Continued)

Available From Consultants Bureau

POROSHKOVAYA METALLURGIYA

No 2(14), Mar, Apr 1963

**CONTENTS** (continued)

	<b>P A G E</b>	
	<b>ENG.</b>	<b>RUSS.</b>
<b>PRODUCTION</b>		
Some Techniques for Obtaining Iron-Manganese Cermet Compounds- I. N. Prantsevich and E. B. Bolko .....	162	96
The Effect of the Magnitude of the Sizing Allowance for Oil-Infiltrated Antifriction Cermet Parts- I. M. Kabel'ski .....	167	104
<b>FROM ABROAD</b>		
Some New Views on the Hot Pressing of Refractory Compounds- S. Schois .....	170	107

Available From Consultants Bureau



**PRZEGŁAD EPIDEMIOLOGICZNY**  
Vol XVIII, No 1, 2, 1964

**CONTENTS**

<b>J. Kostrzewski:</b> The role of The State Institute of Hygiene in control of infectious diseases . . . . .	1
<b>Z. Olejnik, T. Osuch:</b> The function of the gastric mucosa in acute bacterial dysentery . . . . .	9
<b>J. Bończak, A. Adonajło:</b> An analysis of the dysenteric patients treated in an out-patient clinic . . . . .	9
<b>M. Sanecki:</b> Epidemiologic analysis of dysentery in one of the city districts of Warsaw in the years 1961—1962 . . . . .	15
<b>Z. Anusz:</b> <i>Alcalescens-dispar</i> 01 as an etiologic agent of the dysentery syndrome in adults . . . . .	24
<b>M. Macierewicz:</b> The evaluation of <i>Salmonella</i> and <i>Shigella</i> determination method according to the instruction issued by The State Institute of Hygiene . . . . .	24
<b>A. Kułesza:</b> Epidemiologic evaluation of the attenuated poliomyelitis type 2 ( $P_{112}$ ) virus in mass vaccinations in Poland in the years 1961/62 . . . . .	29
<b>W. Szmunes:</b> An effort to characterize the course of epidemics of epidemic hepatitis in rural areas . . . . .	29
<b>B. Łopatka, L. Rzeszut:</b> The heterohemagglutination test with chicken r. b. c. and hyperurobilinogenuria in prophylactic examinations in epidemic hepatitis in school-children in Białystok city . . . . .	29
<b>F. Sawicki:</b> Tetanus as an occupational disease in Poland in the years 1958—1961 . . . . .	38
<b>J. Mierzejewski:</b> Susceptibility of laboratory animals on the botulin toxin type C . . . . .	38
<b>V. T. Busila:</b> A therapy of pertussis concerning its etiology and pathology . . . . .	38
<b>L. Milewska:</b> A few calculation methods of $LD_{50}$ and its confidence limits determination . . . . .	38
<b>W. Głowacka:</b> A piece of history of The State Institute of Hygiene. The activities of Pasteur Department, Warsaw, in 1945—1962 . . . . .	38
<b>H. Wysoczyńska:</b> The diagnostic examination during an influenza epidemic in Gdańsk in 1961 . . . . .	38
<b>R. Lutyński:</b> Tetanus in Cracow province . . . . .	38
<b>Z. Kurdziel:</b> Sensitiveness of <i>Salmonella</i> and <i>Shigella</i> bacilli to antibiotics . . . . .	38
<b>I. Kokocińska, M. Krukowa:</b> An evaluation of usefulness of dried faeces specimens for the bacteriologic examination . . . . .	38
<b>J. Kostrzewski, W. Magdził:</b> The epidemics of smallpox in Poland in the years 1953—1963 . . . . .	44
<b>B. Arendzikowski, W. Kocińska, H. Przestalska:</b> The epidemic of smallpox in Wrocław in 1963 . . . . .	57
<b>A. Surowcowa-Swidzińska, B. Tarkowska-Gawron, T. Hauwling, D. Oleksin:</b> The clinical course of smallpox in the Wrocław epidemic in 1963 . . . . .	69
<b>Z. Skurska:</b> The laboratory diagnosis of smallpox and some difficulties encountered . . . . .	80
<b>A. Ochlewski:</b> Organization of the control of the smallpox epidemic in Wrocław . . . . .	90
<b>S. Penar, S. Przylęcki, D. Zolnierkova:</b> Smallpox in the Wrocław province in 1963 . . . . .	99
<b>J. Majewski, Z. Zasadziński, J. Pysz:</b> Smallpox in the Opole province in 1963 . . . . .	108

(Continued)

Available From OIS 64-11414/1-2

**PRZEGLĄD EPIDEMIOLOGICZNY**  
**Vol XVIII, No 1, 2, 1964**  
**CONTENTS (Contd)**

<b>W. Prażmowski, M. Kacprzak:</b> Smallpox in the Łódź province in 1963 and its control . . . . .	116
<b>T. Olakowski, R. Trzecińska, F. Morawski, S. Pęska:</b> The use of gamma-globulin in the prevention of viral hepatitis in a tuberculosis sanatorium for juveniles . . . . .	120
<b>H. Poznańska, S. Kędrowa:</b> Benzidine oxidase activity in the course of viral hepatitis . . . . .	129
<b>H. Poznańska:</b> Hepatic fructokinase activity in the course of viral hepatitis . . . . .	132
<b>J. Jeliaszewicz, K. Włodarczak, B. Jakubowski:</b> Periodic liquidation and prevention of staphylococcus aureus carrier states . . . . .	*
<b>M. Macierewicz and collaborators of the Sanitary-Epidemiologic Stations:</b> Evaluation of the methods of determining the general salmonella and shigella according to the new instructions of the State Institute of Hygiene. II. Comparative evaluation of the results obtained with newly proposed method in territorial laboratories . . . . .	*
<b>W. Wysoczyńska, B. Mrozińska:</b> An epidemic focus of influenza in Gdańsk in 1963 . . . . .	*
<b>B. Tkacz:</b> The more important treatises on infectious diseases from the Cracow School of Medicine in the 15th—17th centuries . . . . .	141

\* The papers denoted by asterisks may be found in the Polish edition of Epidemiological Review (No. and 2/64).

Available From OTS 64-11414/1-2

# SOVIET RADIOCHEMISTRY

A translation of **RADIOKHIMIYA**

a publication of the Academy of Sciences of the USSR

© 1966 CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N.Y.

Volume 5, Number 3

May-June, 1963

## CONTENTS

	P A G E	
	ENG.	RUSS.
Cocrystallization of the Crystal Hydrate of Argon with the Crystal Hydrates of Silane and Methane - É. K. Gerling and T. V. Kol'tsova . . . . .	249	277
Study of the Behavior of $\text{Sr}^{90}$ in Melts by the Method of Isomorphous Cocrystallization in the Systems $\text{PbCl}_2$ - $\text{SrCl}_2$ - $\text{LiCl}$ and $\text{PbCl}_2$ - $\text{SrCl}_2$ - $\text{NaCl}$ - V. R. Klokman and N. S. Kolesnikov . . . . .	255	284
Investigation of the Extraction of Thorium by Benzhydroxamic Acid - 'Abdel' Gavad Saed, A. V. Lapitskii, and N. P. Rudenko . . . . .	261	290
Quantitative Determination of the Total Rare Earth Elements, Ruthenium, Palladium, and Platinum in Metallic Beryllium by an Activation Method - V. N. Zamyatina and L. A. Chikisheva . . . . .	265	294
Use of Ion-Exchange Resins as Carriers of the Aqueous Phase in Partition Chromatography Separation of Zn, Cd, and Hg - L. N. Moskvina, B. K. Preobrazhenskii, and L. N. Rzhantsyna . . . . .	269	299
Adsorption of Polonium by Glass and Paper Filters in the Presence of Salts - I. E. Starik, B. S. Kuznetsov, and N. I. Ampelogova . . . . .	274	304
Infrared Absorption Spectra of Uranyl Nitrate and Its Complexes with Neutral Addends - V. M. Vdovenko, D. N. Suglov, and V. A. Krasil'nikov . . . . .	281	311
Supplementary Data on the Solubility of the Oxalate of Quadrivalent Uranium - A. A. Grinberg and G. I. Petzshak . . . . .	289	319
Investigation of the Complex Formation of Protactinium with Mono-, Di-, and Polycarboxylic Acids by the Ion-Exchange Method. II. Complex Formation of Protactinium with $\alpha$ -Hydroxyisobutyric and Amygdalic Acids - A. V. Lapitskii and I. Gélétseanu . . . . .	298	330
Comparative Study of Reagents for the Photometric Determination of Plutonium - A. A. Nemodruk, P. N. Palei, and N. E. Kochetkova . . . . .	303	335
Separation of Praseodymium and Neodymium by Electrolysis on a Mercury Cathode. V. P. Shvedov and P. G. Antonov . . . . .	310	342
Determination of Certain Rare Earth Elements by Radiometric Titration with Cupferron - B. M. Mar'yanov and V. V. Serebrennikov . . . . .	314	347
The Positive Ion of Astatine in Nitric Acid Solution - Wang Fu-chung, Yu. V. Norseev, V. A. Khalkin, and Ch'ao T'ao-nan . . . . .	318	351

(continued)

Available From Consultants Bureau

**RADIOKHIMIYA**  
Vol V, No 3, May, Jun 1963

CONTENTS (Contd)

	P A G E	
	ENG.	RUSS.
Determination of $M_{Th} I$ by the Method of Measuring the $\beta$ Radiation of $M_{Th} II$ in a Preparation of Radium Purified of Extraneous Radioelements - N. G. Syromyatnikov, F. A. Mukashev, and L. A. Kapatsinskaya . . . . .	323	356
Application of the Emanation Method to the Investigation of Calcium Hydroasilicates - K. B. Zaborenko, R. Tétner, and L. L. Melikhov . . . . .	328	360
Electromigration Method of Determining the Physicochemical Constants of Compounds Existing in a State of Extreme Dilution. I. Determination of the Path of Ions and Character of the Motion of the Electrolyte During Continuous Electrophoresis on a Porous Filler - V. P. Shvedov and K. V. Kotegov . . . . .	337	369
Electromigration Method of Determining the Physicochemical Constants of Compounds Existing in a State of Extreme Dilution - II. Determination of a Number of Physicochemical Quantities of the Compounds of Tc and Re - V. P. Shvedov and K. V. Kotegov . . . . .	342	374
Role of High-Energy Reactions in the Processes of Stabilization of "Hot" Bromine-82 Atoms in Alkyl Bromides - An. N. Nesmeyanov and É. S. Filatov . . . . .	346	378
 BRIEF COMMUNICATIONS		
Influence of pH on the Sorption of $Co^{60}$ by Peat - A. I. Verdnikov and V. F. Oreshko . . . . .	356	390
Electron Microscopic Investigation of the Influence of the Radioactivity of Elementary Sulfur on the Structure of Its Surface - L. I. Zeinlyanova, I. E. Zimakov, A. M. Lyapina, Vikt. I. Spitsyn, and N. P. Dobrosel'skaya . . . . .	359	392
$\alpha$ Decay of the Isotopes $Cm^{245}$ and $Cm^{246}$ - I. M. Belov, B. S. Dzhelepov, R. B. Ivanov, A. S. Krivokhatskii, V. G. Nedovesov, and V. P. Chechev . . . . .	362	394
Interaction of Recoil Tritium Atoms with Halogen Derivatives of Benzene - V. V. Pozdeev, An. N. Nesmeyanov, and B. G. Dzantiev . . . . .	364	395
Accelerated Method of Isolating Radium Isotopes for Emanation Measurements - P. I. Chaikin and N. V. Golubev . . . . .	367	397

Available From Consultants Bureau

# SOVIET RADIOCHEMISTRY

A translation of RADIOKHIMIYA

a publication of the Academy of Sciences of the USSR

© 1965 CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N.Y.

Volume 5, Number 4

July-August, 1963

## CONTENTS

	P A G E	
	ENG.	RUSS.
Formation of Anomalous Mixed Crystals of $\text{CaF}_2$ - $\text{CeF}_3$ and $\text{CaF}_2$ - $\text{YF}_3$ in the Crystallization of Calcium Fluoride from the Melt—K. G. Myakishev and V. R. Klokman . . . . .	371	401
Adsorption of Iodine Labeled with $\text{I}^{131}$ on a Platinum Surface—G. Tot. . . . .	379	411
Disociation, Dimerization, and Distribution of $\text{Di}(2\text{-Ethylhexyl})\text{Phosphoric Acid}$ in the System Octane-0.1 M $\text{NaClO}_4$ Solution- $\text{HClO}_4$ —V. S. Ul'yanov and R. A. Sviridova. . . . .	386	419
Mixtures of Mono- and $\text{Di}(2,4\text{-Diethyloctyl-1})\text{Methylphosphonates}$ and their Extraction Properties—B. N. Laskorin, D. I. Skorovarov, E. A. Filippov, and A. I. Shilin . . . . .	391	424
Extraction of Complex Acids by Oxygen-Containing Solvents. I. Extraction of Micro- and Macroamounts of Antimony (V) by Alcohols, Ethers, and Esters—G. M. Dakar, B. Z. Iofa, and An. N. Nesmeyanov . . . . .	395	428
Vibration Spectra of Complexes of Zirconium with Organophosphorus Derivatives I. Spectra of Extracts from Hydrochloric and Nitric Acid Solutions—G. P. Nikitina and M. F. Pushlenkov . . . . .	402	436
Interaction in the System Tri-n-Butylphosphine Oxide-Hydrochloric Acid—G. P. Nikitina and M. F. Pushlenkov . . . . .	410	445
Vibration Spectra of Complexes of Zirconium with Organophosphorus Derivatives. II. Complexes of Zirconium Tetrachloride—G. P. Nikitina and M. F. Pushlenkov . . . . .	419	456
Study of Complex Formation of Europium with Oxalate Ion by the Ion Exchange Method —A. S. Kereichuk and V. I. Paramonova . . . . .	427	464
Change in Chemical Potentials of Water in Systems of the Type $\text{UO}_2(\text{NO}_3)_2 \cdot n\text{H}_2\text{O}$ at $25^\circ\text{C}$ —M. A. Yakimov, N. F. Nosova, and V. K. Filippov. . . . .	435	474
Action of $\alpha$ -Radiation on Sulfuric Acid Solutions of Methylene Blue. Mechanism of $\alpha$ -Radiolysis—M. V. Vladimirova and Z. V. Ershova. . . . .	441	479
Extraction of Thorium From Solutions in Nitric Acid by Dibutylphosphoric Acid —Z. A. Sheka and É. I. Sinyavskaya . . . . .	446	485
Extraction of Complex Acids by Oxygen-Containing Solvents. II. Calculation of Equilibrium Constants of Antimony (V) Hydrolysis in Hydrochloric Acid Solutions and Investigation of the Mechanism of its Extraction by Di-n-Butyl Ether—B. Z. Iofa and G. M. Dakar . . . . .	451	490

(Continued)

Available From Consultants Bureau

**RADIOKIMIYA**  
Vol V, No 4, Jul, Aug 1963  
**CONTENTS** (continued)

	<b>P A G E</b>	
	<b>ENG.</b>	<b>RUSS.</b>
Separation of Small Amounts of Thorium from Rare Earth Elements, Iron, and Aluminum on an Ion-Exchange Resin with an Absorbed Reagent—V. A. Nazarenko, E. A. Biryuk, and E. N. Poluéktova . . . . .	457	497
Effect of Covalence of the Interaction of the Cation of a Salting out Agent with Water Molecules on the Salting out Efficiency—O. Ya. Samoilov, R. T. Golovatenko, and V. I. Yashkichev . . . . .	460	499
<b>BRIEF COMMUNICATIONS</b>		
Rational Form of the Distribution Law in Extraction—V. I. Levin. . . . .	465	505
Solubility of Hydrocarbons in Heavy Water—A. N. Guseva and E. I. Parnov . . . . .	467	507
Extraction of Oxalic Acid by Trioctylamine—V. S. Smelov and A. V. Strakhova . . . . .	470	509
Displacement of the Bands in the Absorption Spectra of U(IV) on Formation of Fluoride Complexes—V. M. Vdovenko, G. A. Romanov, and V. A. Shcherbakov . . . . .	472	511
Reaction of Tritium Recoil Atoms in Mixtures of Cyclopentane and Cyclohexane—E. N. Avdonina and An. N. Nesmeyanov . . . . .	475	514
Interaction of Hot Tritium Atoms with Aliphatic Alcohols in the Liquid Phase—An. N. Nesmeyanov, Chiang T'ai-wang, and É. S. Filatov . . . . .	476	515
Effect of Recoil of Co <sup>60</sup> After (γ,n)-Reaction in Complex Compounds of Cobalt Co(III) Triglycinate and Vitamin B <sub>12</sub> —An. N. Nesmeyanov and V. Mudrova-Yablonskaya . . . . .	478	516
Some Peculiarities of the Behavior of Carrier-Free Zirconium-95 in Solutions—L. N. Pankratova, L. G. Vlasov, and A. V. Lapitskii. . . . .	481	519
Preparation of Carrier-Free UX <sub>3</sub> (Th <sup>232</sup> ) by Extraction—Yu. A. Afanas'ev and A. I. Ryabinin . .	483	520

Available From Consultants Bureau

# GLASS and CERAMICS

*A translation of **STEKLO I KERAMIKA**,  
a publication of the Academy of Sciences of the USSR*

© 1965 CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N. Y.

Vol. XXI, Nos. 1-2

January-February, 1964

## CONTENTS

	P A G E	
	ENG.	RUSS.
<b>VOL. 21, NO. 1</b>		
Tasks for the Glass and Ceramics Industries During 1964-1965 .....	1	1
Obtaining Crystallized Foam Glass—I. I. Kitaigorodskii and T. L. Shirkevich .....	4	5
The Optimum Depth of Furnaces for Dark Green Glass—K. K. Vilnis, M. G. Stepanenko, and A. Yu. Kaplan .....	9	9
The Influence of Chemical Treatment of Glass Surfaces on Some of Its Properties —S. K. Dubrovo and Yu. I. Skorik. ....	14	13
Elastic Expansion, Air Compression and the Efficacy of Vacuum Treatment During the Pressing of Ceramics—F. V. Kondrashev and R. Ya. Popil'skii .....	18	17
High Alumina Porous Ceramic with a High Gas Permeability—V. D. Tsigler and B. E. Pindrik .	25	22
Separate Determination of Alkalis in Feldspar by the Graphic Method—V. P. Kramarenko. . .	29	26
Methods of Increasing the $K_2O:Na_2O$ Ratio in Feldspars—V. I. Raynitsuev, S. I. Kropanev, and V. V. Peskov .....	32	28
<b>INDUSTRIAL EXPERIENCE</b>		
Use of Fluorine in Sheet Glass Manufacture—N. E. Prodanova .....	37	33
Electron-Microscopic Study of Polishing Powders—L. I. Sankova and R. V. Ivanova .....	39	34
<b>ECONOMIC THEMES</b>		
Rational Use of Window and Polished Glass in the National Economy—M. A. Plotkina and B. L. Posin .....	42	37
<b>IN FACTORIES AND INSTITUTES</b>		
The Armavir Combine and Heavy Chemicals—A. S. Volkov. ....	46	40
Institute of Technical Progress—I. M. Slesin. ....	47	41
FROM FOREIGN JOURNALS. ....	48	41
<b>INFORMATION</b>		
International Conference on the Investigation and Use of Clays in Sweden—A. D. Fedoseev. . .	51	44
New All Union State Standards—V. D. Kuzakov. ....	54	46
<b>CRITICISM AND BIBLIOGRAPHY</b>		
"Electric Melting of Glass"—G. M. Matveev and B. L. Rudol .....	56	47

(Continued)

Available From Consultants Bureau

**STEKLO I KERAMIKA**  
Vol XXI, No 1, 2, 1964

**CONTENTS (Contd)**

	<b>P A G E</b>	
	<b>ENG.</b>	<b>RUSS.</b>
New Books from Gosstroizdat . . . . .	58	48
<b>Vol. 21, No. 2</b>		
Structural Changes in Colored Glasses During Hardening in Liquids—I. I. Kitaigorodskii and V. I. Zhorov . . . . .	60	1
Investigating the Movement of Glass in the Forming of Continuous Glass Fiber by High Speed Filming—S. S. Kutukov and M. D. Khodakovskii . . . . .	63	3
Obtaining Glass From the Slurries of Processed Nepheline Rocks—V. D. Ponomarev, R. L. Shuster, and M. M. Gol'dman . . . . .	71	11
Investigating the Work of an Abrasives Classifier at the Saratov Technical Glass Plant—N. V. Zolotarev, L. I. Vysotskii, V. M. Kalyakin, and É. V. Shabanova . . . . .	72	12
Mysov Sands as Material for the Glass Industry—Yu. D. Kruchinin, V. I. Revnitshev, and G. K. Gerasimova . . . . .	77	16
Rational Use of Fuel in Tunnel Kilns in Building Ceramic Factories—B. N. Gak . . . . .	81	18
Causes of the Formation of Bubbles, Crawling and Similar Faults in Glasses Before Firing—A. M. Akh'yan . . . . .	88	23
Drain Pip from Fusible Bel'gopak Clays—P. V. Iznosov . . . . .	91	28
Transparent Glaze for Tuff Electric-Insulating Products—M. G. Manvelyan, R. V. Manukyan, and N. S. Davidyants . . . . .	93	27
Use of Wellastonite for Making Filtering Ceramics—M. A. Matveev, K. A. Smirnova, and T. I. Rodina . . . . .	96	29
Role of the Electric Conductance of Melts in Ground Enamels During Reaction with Metal—L. D. Svirskii and L. L. Salganik . . . . .	100	33
Dust-Like Quartz—Raw Material for Enamels—A. T. Logvinenko, S. A. Kogan, and N. A. Shugurova . . . . .	104	37
<b>INDUSTRIAL EXPERIENCE</b>		
Conveyer for Making Sheets of Ceramic Tiles for Large-Panel Home Building—É. D. Turovskii, N. B. Kurolapnik, and N. A. Bershadskaya . . . . .	107	40
Electron Slip Level Controller—O. A. Efisev . . . . .	109	42
<b>ECONOMIC THEMES</b>		
Follow-up to Our Articles: Improving the Planning of Production—A Real Job . . . . .	110	43
FROM FOREIGN JOURNALS . . . . .	112	44
<b>CRITICISM AND BIBLIOGRAPHY</b>		
An Interesting Book—I. I. Kitaigorodskii . . . . .	117	48
New Books from Gosstroizdat . . . . .	118	48

Available From Consultants Bureau



# GLASS and CERAMICS

A translation of СТЕКЛО И КЕРАМИКА,  
a publication of the Academy of Sciences of the USSR

© 1965 CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N. Y.

Vol. XXI, Nos. 3-4

March-April, 1964

## CONTENTS

	P A G E	
	ENG.	RUSS.
VOL. 21, NO. 3		
Facade-Facing Ceramics—Wide Developments . . . . .	121	1
Factory Newspapers Report . . . . .	123	3
Calculating the Drawing Schedule for Sheet Glass—K. I. Braginskii . . . . .	124	4
New Method of Controlling Structural Changes in Glass-Crystalline Materials—A. F. Borisov and V. I. Zadumin . . . . .	131	9
Factory Newspapers Report . . . . .	134	11
Investigating the Production Cycles for Glass Fibers Without Surface Defects—L. K. Ismailova and G. M. Bartenev . . . . .	135	12
Colored Ceramics—Facing Materials for the Facades of Large-Panel Building—A. A. Kopelkin and M. G. Lundina . . . . .	140	16
Rapid Method of Determining Quartz in Ceramic Materials—E. I. Zavarzina . . . . .	143	20
New Types of Coatings for Correcting Glaze Defects on Insulators—L. A. Ivakhina and R. I. Gress . . . . .	147	23
The Effect of Calcium Oxide on Some Properties of Ground Enamels—G. I. Belyaev and N. F. Smakota . . . . .	150	26
LETTERS TO THE EDITOR		
Supplying Fine Ceramics Plants with High Grade Kaolin . . . . .	154	30
INDUSTRIAL EXPERIENCE		
Developing Electric Melting of Low Alkali Glass—L. G. Gerdimenkova . . . . .	156	31
Increasing the Life of a Tank Furnace Used to Produce Vitrified Glass (Érkies)—A. P. Siper and V. Ya. Bukhlartsev . . . . .	157	33
Transporting "Raw" Glass from Lehr to the ShS-500R Conveyor—Yu. S. Kashtanov and Yu. I. Vasil'ev . . . . .	159	35
Machine for Applying Enamel Slip to Large Steel Articles—N. A. Kotov and B. A. Chertkov . . . . .	161	36
ECONOMIC THEMES		
Economic Effectiveness of Using Electric Melting of Glass—M. I. Bereshkovskaya . . . . .	163	38
A Wide Road to the Firm—B. V. Gubin . . . . .	167	41

(Continued)

Available From Consultants Bureau

STEKLO I KERAMIKA  
Vol XXI, No 3, 4, 1964

**CONTENTS** (continued)

	<b>P A G E</b>	
	<b>ENG.</b>	<b>RUSS.</b>
<b>FROM FOREIGN JOURNALS</b> .....	170	43
<b>INFORMATION</b>		
Improving the Quality and Renewing the Range of Domestic Glasswares .....	173	45
O. K. Borvinkin .....	175	47
<b>CRITICISM AND BIBLIOGRAPHY</b> .....	177	48
 <b>VOL. 21, NO. 4</b>		
<b>New Books from Stroiizdat</b> .....	180	Inside front cover
<b>For Further Progress in the Structural and Technical Glass Industry</b> .....	181	1
<b>Electric Conductivity of Sodium-Calcium-Magnesium Aluminosilicate Glasses in the Molten State</b> —K. A. Kostanyan and O. K. Geokchyan .....	185	5
<b>Rational Use of Refractories</b> —A. K. Sharmanov .....	188	8
<b>Effect of Absolute and Relative Humidity of Air on the Bending Resistance of Glass Fabrics</b> —I. L. Peisakhov, L. N. Bykhovets, and G. I. Liliyanov .....	191	11
<b>New Concentrates of Rare-Earths and Titania for Coloring Glass</b> —N. A. Yudin .....	194	14
<b>Single-Firing of Facing Tiles</b> —Z. A. Nosova, M. K. Gal'perina, and Ya. B. Kirshenbaum .....	196	15
<b>New Cross-Piece Design for Press Die Used to Shape Ceramic Pipes</b> —N. S. Shchepilov and Z. M. Shchedrinakaya .....	201	20
<b>Calculating Hydrocyclones for Kaolin Enrichment</b> —V. V. Klyachin .....	203	22
<b>Testing a Battery of Hydrocyclones for Kaolin Enrichment at the Glukhovets Kaolin Combine</b> —V. A. Mel'nik .....	210	27
<b>The Building Material Glass</b> —A. V. Nekhoroshev .....	213	30
<b>High-Voltage Insulators with an Increased Leakage Path</b> —M. A. Matveev, S. I. Ivakhin, B. I. Gaidash, and V. P. Konoplyanikova .....	215	36
<b>INDUSTRIAL EXPERIENCE</b>		
<b>Replacing a Wall Block Without Stopping the Furnace</b> —I. N. Golikov .....	221	33
<b>Chemical Compositions of Lead-Barium Crystal</b> —N. N. Ermolenko, V. P. Zhuk, N. M. Komar, N. P. Sadchenko, and T. V. Stolyarova .....	223	40
<b>Modernization of Double-Spindle Semi-Automatic Forming Machines</b> —L. G. Resnikov .....	224	41
<b>FROM FOREIGN JOURNALS</b> .....	235	43
<b>INFORMATION</b>		
<b>Increasing the Capacity of Glass Furnaces in Sheet Glass Plants</b> .....	232	48

Available From Consultants Bureau

## CONTENTS

Some recent work and further problems in the theory of queues	D. G. KENDALL	1
On A. Wald's test comparing two normal samples	Yu. V. LINNIK	14
Multi-dimensional limit theorems for large deviations and their application to the $\chi^2$ distribution	W. RICHTER	28
On a central limit theorem for random elements with values in Hilbert space	N. P. KANDELAKI and V. V. SOZANOV	38
On families of random transitions	N. N. VOROB'YEV	47
Extension of stationary stochastic processes	K. R. PARTHASARATHY and S. R. S. VARADHAN	65
Optimum estimation of the moment of emergence of a signal in the presence of multiplicative high-frequency Gaussian noise	V. A. VOLKONSKIY	72

## SHORT COMMUNICATIONS

On a theorem of V. M. Zolotarev	W. HOFFDING	89
The probability of loss of calls in heavy traffic	O. V. VISKOV and Yu. V. PROKHOROV	92
A rate of convergence problem in the theory of queues	D. VERE-JONES	96
On the convergence to normality of quadratic forms in independent variables	P. WHITTLE	103
On the representation of infinitely divisible distributions on locally compact abelian groups	K. R. PARTHASARATHY and V. V. SAZANOV	108
Topology in a group and convergence of distributions	B. M. KLOSS	111
On functions which are superharmonic for Markov processes	M. G. SHUR	114
Dirichlet's problem for an equation with periodic coefficients depending on a small parameter	M. I. FREIDLIN	121
On the behavior of the invariant measure of a diffusion process with small diffusion on a circle	M. B. NEVEL'SON	125
On an age-dependent branching process	O. P. VINOGRADOV	131
On M. Kadyrov's random numbers in J. Janko's statistical tables	L. N. BOL'SHEV	136
On estimates for the entropy of a language according to Shannon	A. P. SAVCHUK	138
On estimating regression	E. A. NADARAYA	141
On limit distributions for order statistics	D. M. CHIBISOV	142
Separating partitions for a finite family of measures	S. M. VISHIK, A. A. KOBRINSKIY and A. L. ROSENTHAL	148
On evaluating final states in inventory processes	I. V. ROMANOVSKIY	149
On I. D. Cherkasov's paper 'On the transformation of a diffusion process to a Wiener process'	F. V. SHIROKOV	156
Two asymptotic formulas in the theory of queues	O. V. VISKOV	158
A problem of optimum distribution of search effort	V. I. ARKIN	159
Answer to a question of R. L. Dobrushin	V. V. SOZANOV	160
Summary of papers presented at the meetings of the probability and statistics section of the Moscow Mathematics Society		161
Information concerning the symposium on limit theorems		167
The seventh all-union conference on probability theory and mathematical statistics		167
Letter to the editor		168

Available From Society for Industrial and Applied  
Mathematics

<u>K. N. Verigo and A. V. Troitskii</u> THE INTRODUCTION OF AUTOGENOUS ORE GRINDING TO INDUSTRY MUST BE ACCELERATED.....	1 (1)
<u>B. M. Sobiev</u> AUTOGENOUS GRINDING - A PROGRESSIVE DIRECTION FOR IMPROVING ORE GRINDING TECHNIQUES.....	6 (6)
<u>B. A. Bocharov and L. D. Kislyakov</u> FLOTATION CONDITIONS FOR COPPER AND ZINC SULFIDES FROM ORE PULPS.....	9 (9)
<u>I. M. Tsyroda, V. N. Kazakov, N. A. Kolesnikov, N. G. Bryukhanov, A. A. Burba, V. I. Sadykov and A. D. Pigarev</u> INDUSTRIAL TESTS OF A FLOWSHEET FOR PROCESSING ALTAI POLYMETALLIC ORES, USING THE SYSTEM DEVELOPED BY THE MEDNOGORSK COMBINE.....	13 (12)
<u>A. T. Drobchenko, V. N. Mazanik, B. N. Ranskii, V. A. Kharain, V. I. Smirnov and A. I. Tikhonov</u> RULES GOVERNING THE PROCESS OF REDUCTION FOR THE LIQUID SLAGS OF COPPER SMELTING.....	17 (15)
<u>A. I. Levin</u> DEVELOPMENT OF ELECTROCHEMICAL SCIENCE AND TECHNOLOGY IN THE AREA OF METALS ELECTRODEPOSITION.....	21 (19)
<u>G. N. Palkhomov</u> INTENSIFICATION AND MECHANIZATION OF ELECTROLYTIC DEPOSITION OF ZINC.....	27 (25)
<u>E. N. Glazkov and A. S. Antonov</u> HYDROMETALLURGICAL TREATMENT OF LEAD PRODUCTS BY MEANS OF AMINE LEACHING.....	31 (28)
<u>Zh. Auezov</u> PROCESSING BISMUTH DROSS.....	35 (32)
<u>A. A. Rozlovskii, V. A. Til'ca and A. I. Ustinov</u> FLUIDIZED BED OXIDIZING ROASTING OF ANTIMONY AND ANTIMONY-MERCURY FLOTATION CONCENTRATES.....	37 (34)
<u>P. S. Saakyan</u> MEASURING CURRENT EFFICIENCY IN ALUMINUM ELECTROLYSIS BY ANALYZING THE COMPOSITION OF ANODE GASES.....	41 (38)
<u>A. A. Eliseeva and V. A. Mazel'</u> EFFECT OF POTASSIUM ALKALI ON SINTERING AND DESILICIFICATION PROCESSES DURING PRODUCTION OF ALUMINUM OXIDE FROM BAUXITES.....	47 (44)
<u>N. V. Oshcherkova, M. A. Kuvakin and V. V. Zelenina</u> MICROSCOPIC INVESTIGATION OF ELECTRODE MASS.....	54 (51)
<u>P. I. Bobikov, V. F. Borbat, A. V. Bugaeva and V. I. Dolzikh</u> EXTRACTING SE (IV) WITH AMINES.....	58 (54)
<u>S. A. Amirova, V. V. Pechkovskii and R. Kh. Kurmaev</u> EXTRACTING VANADIUM FROM CONVERTER SLAG.....	61 (57)
<u>M. V. Chulchrov, A. S. Vyatkin and V. V. Sokolov</u> CONTINUOUS HORIZONTAL CASTING OF MAGNESIUM.....	64 (60)
<u>V. L. Kolmogorov, S. I. Orlov, K. P. Selishchev, E. M. Lekarenko, G. N. Pokrovskaya, D. Ya. Tikhonov and I. F. Bogomolov</u> DRAWING WIRE, MADE OF NON-FERROUS METALS AND ALLOYS, UNDER FLUID FRICTION CONDITIONS.....	68 (65)
<u>V. I. Erabets and A. G. Nuzhnev</u> PRODUCTION OF NICKEL-BASE THERMO-COUPLE WIRE.....	71 (67)
ISAI ZAKHAROVICH MARGOLIN.....	73 (70)
EVGENII MOISEEVICH LEKARENKO.....	74 (71)
<u>L. D. Kulikov, S. I. Popov and N. K. Khomullo</u> TECHNOLOGY OF CONCENTRATING IMPREGNATED SULFIDE ORES FROM THE LEVJGA AND THE LOMOVKA DEPOSITS.....	75 (72)
<u>V. I. Kartazin, A. A. Bebash and E. A. Popkov</u> WET MAGNETIC SEPARATION OF FINE-GRAINED WEAKLY MAGNETIC MINERALS.....	77 (74)
<u>M. F. Prikhnya</u> EXPERIENCE IN THE USE OF OLEIC ACID EMULSIONS AT THE TYRNYAUZ CONCENTRATION PLANT.....	79 (76)
<u>M. Ya. Rvskin and I. T. Tsvetkov</u> COFILTRATION OF FLUXES AND COPPER CONCENTRATES.....	79 (76)

(Continued)

TSVETNYE METALLY  
Vol XXXVI, Dec 1963

Table of Contents (Cont.)

<u>V. N. Ryabuzov</u> IMPROVING INSULATION RELIABILITY IN THE TRAVELING CRANES OF ELECTROLYZING BATHS.....	80	(77)
<u>V. T. Burda and V. N. Yagakov</u> OPERATIONAL COST PLANNING FOR THE LEAD PLANT OF THE LENINGORSK COMBINE.....	82	(78)
COORDINATING RESEARCH IN THE FIELD OF AUTOGENOUS ORE GRINDING.....	84	(80)
ORGANIZING A SCIENTIFIC-TECHNICAL COUNCIL IN THE STATE COMMITTEE ON FERROUS AND NON-FERROUS METALLURGY.....	85	(81)
<u>G. Zubkov</u> EQUIPMENT FOR TYPE DSS ACTIVE DISPATCHER TELECOMMUNICATIONS SYSTEMS.....	86	(82)
<u>N. I. Mikhailov, G. I. Gnatyshenko and G. V. Kim</u> REVIEW OF "POLYMETAL- LIC MATES AND THEIR CONVERSION," BY M. A. ABDEEV.....	87	(83)
TABLES OF CONTENTS FOR 1963 ISSUES OF "TSVETNYE METALLY".....	92	(87)

NOTE: Numbers in parentheses represent page numbers in Russian original.

Available From Primary Sources  
Vol IV, No 12

Page	Russian Reference
------	----------------------

## Meetings and Conferences

### From the Current Literature

## Personalia

Available From American Institute of Physics  
Vol VII, No 5

# Industrial Laboratory

*A translation of Zavodskaya Laboratoriya, a publication of the  
State Scientific-Technical Committee of the  
Council of Ministers of the USSR*

Vol. 30, No. 11

November, 1964

## CONTENTS

	PAGE	RUSS. PAGE
Automation of Production and Analytic Control . . . . .	1613	1299
METHODS OF CHEMICAL ANALYSIS		
The Development of Analytical Methods for the Determination of Rhenium (Review). <u>V. M. Tarayan and S. V. Vartanyan</u> . . . . .	1615	1301
Chromatography Without a Carrier Gas and the Phenomenon of Adsorptive Displacement. <u>A. A. Zhukhovitskii, M. S. Selenkina, N. M. Turkel'taub, V. P. Shvartsman,</u> <u>A. F. Shlyakhov, and I. A. Smirnova</u> . . . . .	1624	1308
A Chromatographic Pulse-Thermal Method for the Analysis of Gases. <u>G. N. Dantsig</u> . . . .	1630	1313
Automatic Control of Ethylene Quality. <u>V. Ya. Al'perovich</u> . . . . .	1634	1317
The Electrochemical Phase Analysis of High-Carbon Steels. <u>Yu. A. Klyachko</u> and <u>G. K. Baranova</u> . . . . .	1636	1318
The Determination of Nitrosyl Chloride, Hydrogen Chloride, and Nitric Oxide. <u>A. A. Strel'tsova, L. A. Levashova, and M. N. Portnova</u> . . . . .	1639	1321
Determination of the Reduced Forms of Quinones in the Production of Hydrogen Peroxide. <u>R. S. Fraiman and N. A. Ivanova</u> . . . . .	1641	1323
The Chemiluminescent Determination of Copper in Zinc and in High-Purity Alkali. <u>A. K. Babko and L. I. Lubovenko</u> . . . . .	1644	1325
The Determination of Zirconium, Zirconium Carbide, and Zirconium Dioxide <u>L. S. Kozyreva, A. F. Kuteinikov, and N. P. Zharova</u> . . . . .	1647	1328
The Amperometric Titration of Niobium with Pyrocatechol. <u>N. G. Komolova</u> and <u>I. A. Tserkovnitskaya</u> . . . . .	1649	1329
Rapid Photocolorimetric Determination of Iron in Nickel-Base Alloys (Exchange of Experience). <u>L. Z. Belizerman</u> . . . . .	1651	1331
Complexometric Determination of Aluminum in the Presence of Phosphorus (Exchange of Experience). <u>N. I. Usacheva and L. M. Lapina</u> . . . . .	1652	1331
The Determination of Germanium in Plant Solutions (Exchange of Experience). <u>N. V. Lebedeva</u> . . . . .	1653	1331
The Complexometric Determination of Aluminum in Nepheline-Apatite Ores and in Nepheline Concentrates (Exchange of Experience). <u>V. Ya. Artem'eva</u> . . . .	1654	1331
The Determination of Sulfate in Sodium Dichromate (Exchange of Experience). <u>L. K. Ponomareva and L. I. Vasserman</u> . . . . .	1655	1332
The Determination of the Moisture in Free-Flowing Materials by an Extraction Method (Exchange of Experience). <u>R. I. Venediktova and I. V. Vlasenko</u> . . . . .	1656	1332

(Continued)

Available From Instrument Society of America

Zavodskaya Laboratoriya  
Vol XXX, No 11, 1964

CONTENTS (Contd)

	PAGE	RUSS. PAGE
The Determination of Impurities in Ethyl Acetate by Means of Gas-Liquid Chromatography (Exchange of Experience). <u>É. Z. Druskina, Yu. K. Shaposhnikov, and Yu. V. Vodzinski</u> . .	1657	1333
The Determination of Styromal in Effluent Waters (Exchange of Experience). <u>V. P. Sokolov</u> . .	1658	1333
METHODS OF SPECTRAL ANALYSIS		
The Use of Local X-Ray Spectral Analysis in the Study of Dendritic Liquation. <u>T. V. Egorshina and S. B. Maslenkov</u> . . . . .	1659	1334
Toward the Problem of X-Ray Spectral Analysis of Lanthanides in Solution According to Fluorescence K Spectra. <u>G. V. Bondarenko and M. A. Biokhin</u> . . . . .	1663	1337
Chemical-Spectrographic Determination of Admixtures of the Rare-Earth Elements in Rare-Earth Bases. <u>Sh. G. Melamed, A. S. Kostygov, and T. V. Lishchenko</u> . . . . .	1665	1339
Spectrographic Determination of Hydrogen in Nickel and Copper and of Oxygen in Copper. <u>A. B. Shaevich, V. V. Danilevskaya, N. I. Zhorova, G. P. Kazarina, and A. G. Torovina</u> . .	1671	1343
The Spectral Analysis of Open-Hearth Slags by the Method of Conditional Integral Graphs. <u>V. D. Ivanova, L. I. Topalov, A. B. Shaevich, V. V. Danilevskaya, and M. N. Sazonova</u> . .	1674	1346
The Spectroanalytical Determination of Traces of Boron in Semiconducting Graphite. <u>L. B. Gorbunova, E. S. Kon'kova, and A. F. Kuteinikov</u> . . . . .	1677	1348
Spectral Analysis of Aluminum Alloys with Make-and-Brake-Electric-Spark and Make-and-Break-Pulse Selection of Samples (Exchange of Experience). <u>E. S. Obukhova, Yu. S. Kalinin, N. K. Rudnevskii, and K. I. Taganov</u> . . . . .	1679	1349
Determining Hydrogen with the ISP-28 Spectrograph (Exchange of Experience). <u>S. B. Shubina and N. I. Zhorova</u> . . . . .	1680	1350
PHYSICAL METHODS OF INVESTIGATION		
Reflection of Ultrasound from Corner Defects. <u>I. N. Ermolov, V. S. Grebennik, and A. Z. Raikhman</u> . . . . .	1681	1351
Choice of the Type of Current for Magnetic Flaw Detection. <u>P. G. Mikhnevich</u> . . . . .	1686	1355
Certain Errors in Using Small-Angle Scattering of X-Rays. <u>Ya. S. Umanski and N. V. Chirikov</u> .	1689	1357
Method of Determining the Degree of Contamination of Rail Steel with Lines of Nonmetallic Inclusions. <u>M. S. Mikhalev</u> . . . . .	1692	1360
Electrolytic Point Polishing and Etching of Germanium. <u>V. N. Maslov and A. V. Lishina</u> . . . .	1694	1362
Method for Testing the Heat Resistance of Protected Molybdenum. <u>I. M. Kvokova and V. I. Lainer</u> . . . . .	1696	1363
Method for Evaluating Aerosol Filters by Means of Polydisperse Aerosols. <u>L. F. Radushkevich and V. A. Kolganov</u> . . . . .	1698	1365
The Use of X-Ray Fluorescence for Determining the Manganese Content of Ores (Exchange of Experience). <u>V. K. Kalozha and V. P. Tsvetkov</u> . . . . .	1701	1367
An Improvement of a Method for Determining Surface Tension at the Solution-Air Interface (Exchange of Experience). <u>N. N. Balashova and I. A. Efimov</u> . . . . .	1702	1367
A Proximate Method for Determining the Specific Gravity of Liquids and Solids (Exchange of Experience). <u>A. N. Bodan</u> . . . . .	1704	1368
Conducting Transparent Coatings for Lucite and Polymer Films (Exchange of Experience). <u>B. P. Kryzhanovskii and A. Ya. Kuznetsov</u> . . . . .	1705	1369
X-Radiography of Current-Carrying Electrodes (Exchange of Experience). <u>N. N. Fedorova</u>	1706	1370
MECHANICAL METHODS OF TESTING		
Methods of Evaluating Deterioration in Heat-Resisting Materials. (A Survey). <u>L. B. Getsov</u> . . .	1707	1371
Determining the Elastic Properties of Metals and Carbides by an Ultrasonic Pulse Method. <u>L. M. Mukhin</u> . . . . .	1717	1379
Nonuniform Three-Dimensional Compression at High Temperatures and with External Friction. <u>A. D. Kovalenko and L. T. Timoshuk</u> . . . . .	1719	1381

(Continued)

Available From Instrument Society of America



**ZAVODSKAYA LABORATORIYA**  
Vol XXX, No 11, 1964

**CONTENTS (Contd)**

	PAGE	RUSS. PAGE
A Method for Determining the Energy Losses During Elastic-Plastic Impact. <u>F. S. Savitskii</u> . . . . .	1724	1385
An Experimental Investigation of the Accuracy and Reliability of Thin-Line Measuring Grids. <u>I. P. Renne, M. N. Tsypina, and L. G. Yudin</u> . . . . .	1727	1387
The Determination of the True Ultimate Strength and Uniform Contraction of Cross Sectional Area from Experimental Points on the True Stress Diagram. <u>L. G. Kharitonov</u> . . . . .	1731	1391
On the Method of Determining the Cohesion Strength of Layers in Circular Bimetallic Rods (Exchange of Experience). <u>A. N. Chernov and V. V. Gulyaev</u> . . . . .	1735	1394
<b>INSTRUMENTS AND LABORATORY TECHNIQUES</b>		
A Machine for Testing Metals for Fatigue in Bending Combined with Static Torsion. <u>S. N. Nichiporchik</u> . . . . .	1736	1395
A Machine for Tensile Testing. <u>V. I. Pryanikov</u> . . . . .	1738	1396
An Automatic Loading Attachment with a Damping Unit to the PMT-3 Device. <u>V. F. Berdikov,</u> <u>A. V. Gur'ev, and G. V. Malovechko</u> . . . . .	1740	1398
An Automatic Device for Determining the Softening Temperature of Polymers by the Penetration Method. <u>S. K. Zakharov and E. V. Kuvshinskii</u> . . . . .	1742	1399
A Device for Measuring the Electrical Conductivity of Molten, Chemically Active High-Melting- Point Metals. <u>V. P. Elyutin, M. A. Maurakh, and V. D. Turov</u> . . . . .	1745	1401
A Device for the Inspection of Small Areas on the External Layer of Ferromagnetic Parts. <u>A. D. Yaroshek</u> . . . . .	1747	1403
A Device for Determining the Coefficients of Thermal and Temperature Conductivities of Thermal Insulation. <u>R. E. Krzhizhanovskii and I. I. Chudnovskaya</u> . . . . .	1749	1404
The Investigation of Thermal Processes by Means of Copper-Constantan Thermocouples. <u>Yu. M. Blazhko</u> . . . . .	1751	1406
A Device for the Investigation of the Scatter of Light in Polymer Solutions. <u>N. P. Zakurdaeva,</u> <u>A. A. Petrova, V. S. Bronsvager, and D. K. Beridze</u> . . . . .	1753	1407
A Device for Determining the Softening Point of Sintered Iron Ore Pellets. <u>V. N. Milyutin</u> and <u>S. T. Rostovtsev</u> . . . . .	1755	1408
Atomizing Systems for the Spectral Analysis of Solutions. <u>N. I. Tarasevich</u> and <u>Moseli Mokhamed</u> . . . . .	1757	1409
An Automatic Apparatus for the Turbidimetric Analysis of Polymers. <u>B. Ya. Voronov</u> and <u>G. I. Volkova</u> . . . . .	1759	1411
A Machine for Long-Term Strength and Creep Testing (Exchange of Experience). <u>V. A. Zhukov and T. K. Marinets</u> . . . . .	1762	1413
Device for Determining the Modulus of Elasticity at Low Temperatures (Exchange of Experience) <u>S. F. Kovtun and R. A. Ul'yanov</u> . . . . .	1763	1414
Elastic Dynamometer for Measuring Impact Loads (Exchange of Experience). <u>F. S. Savitskii</u> . . . . .	1764	1414
Load Stabilizing Unit for GRM-2 Machine (Exchange of Experience). <u>A. M. Lerner</u> and <u>N. E. Morekhodtsev</u> . . . . .	1765	1415
Table Model of a Device for Testing Plastics in Torsion (Exchange of Experience). <u>Yu. F. Leksashev</u> . . . . .	1766	1415
Dilatometer for High Cooling Rates (Exchange of Experience). <u>I. V. Karpov</u> . . . . .	1767	1416
A Machine for Winding Quartz Springs (Exchange of Experience). <u>B. S. Bryushkov,</u> <u>V. P. Bychkov, and A. F. Mamonov</u> . . . . .	1769	1417
Device for Determining Changes in the Moisture Content of Materials During Processing in an Autoclave (Exchange of Experience). <u>M. Ya. Krivitskii, P. A. Makarov,</u> and <u>A. N. Schastnyi</u> . . . . .	1770	1417
Device for Remotely Recording the Kinetics of Some Radiation-Chemical Processes (Exchange of Experience). <u>I. M. Barkalov and V. I. Krylov</u> . . . . .	1771	1418

(Continued)

Available From Instrument Society of America

ZAVODSKAYA LABORATORIYA  
Vol XXX, No 11, 1964

CONTENTS (Contd)

	PAGE	RUSS. PAGE
Laboratory Plate Columns for Continuous Operation (Exchange of Experience).		
<u>S. G. Evdokimov</u> . . . . .	1772	1419
A Modified Comparison Electrode for Amperometric Titration (Exchange of Experience).		
<u>O. A. Songina and A. A. Usvyatsov</u> . . . . .	1773	1419
IN THE INDUSTRIAL LABORATORIES		
The Most Important Problems of the Development of Industrial Chemical Laboratories.		
<u>S. K. Shcherbak and G. A. Skorokhod</u> . . . . .	1774	1421
In the Central Laboratory of the Bereznikov Potassium Combine. <u>V. R. Yankovski</u> . . . . .	1776	1422
INFORMATION		
A School-Seminar for Analytic-Laboratory Workers of the USSR Aluminum Industry.		
<u>I. F. Baryshnikov</u> . . . . .	1778	1424

Available From Instrument Society of America

ZHURNAL' EKSPERIMENTAL'NOI I TEORETICHESKOI FIZIKI  
Vol XLVII, No 4, Oct 1964

CONTENTS	Page	Russian Reference
A Method for Measuring the Field Distribution in an Open Resonator. (E) . . . . .	791	47, 1173
Formation of $\text{Li}^8$ Fragments in the Interaction of 9 BeV Protons with Lead Nu- clei. (E) . . . . . W. Gajewski, P. A. Gorichev, and N. A. Perfilov	795	47, 1178
Properties of Excited $\text{F}^{19}$ Levels between 8.5 and 10.5 MeV. (E) . . . . .	800	47, 1185
Photoproduction of Neutral $\pi$ Mesons from Protons at 210 MeV. (E) . . . . .	809	47, 1199
Investigation of the Compressibility of Five Ionic Compounds at Pressures up to 5 Mbar. (E) . . . . . S. B. Kormer, M. V. Sinitsyn, A. I. Funtikov, V. D. Ustin, and A. V. Blinov	811	47, 1202
Pair Angular Correlation of Secondary Particles in Cosmic Ray Showers with Energies $E_0 > 10^{11}$ eV. (E) . . . . . A. P. Mishakova and B. A. Nikol'skii	820	47, 1214
Passage of Lithium Ions Through Condensed Targets. (E) . . . . .	825	47, 1221
Elastic Scattering of 650-MeV Protons. (E) . . . . . L. I. Pivovarov, L. I. Nikolaichuk, and V. M. Rashkovan	830	47, 1228
Lifetime of the 114-keV Level in the $\text{Pr}^{139}$ Nucleus. (E) . . . . . V. M. Guzhavin, G. K. Kliger, V. Z. Kolganov, A. V. Lebedev, K. S. Marish, M. A. Musin, Yu. D. Prokoshkin, V. T. Smolyankin, A. P. Sokolov, L. M. Soroko, and Ts'ui Wa-Ch'uang	833	47, 1232
Formation of Highly Excited Hydrogen Atoms by Proton Charge Exchange in Gases. (E) . . . . . R. N. Il'in, B. I. Kikiani, V. A. Oparin, E. S. Solov'ev, and N. V. Fedorenko	835	47, 1235
Elastic Scattering of $d\mu$ Mesic Atoms on Protons, Deuterons, and Complex Nuclei. (E) . . . . . V. P. Dzhelepov, P. F. Ermolov, V. I. Moskalev, V. V. Fil'chenkov, and M. Fridl	841	47, 1243
Magnetic Properties of Gadolinium-terbium and Gadolinium-erbium Alloys. (E) . . . . .	851	47, 1257
Mass Spectrum of Charged Particles Emitted in the Absorption of $\pi^+$ Mesons by Photographic Emulsion Nuclei. (E) . . . . . V. I. Chechernikov, Iuliu Pop, and I. V. Burov	854	47, 1262
An Experimental Attempt to Detect Two-proton Decay of $\text{Ne}^{18}$ . (E) . . . . .	860	47, 1270
A Statistical Analysis of the Angular Distribution of Shower Particles. (T) . . . . .	864	47, 1273
Quantum Correlation Functions in a Maxwellian Plasma. (T) . . . . .	866	47, 1279
Growth of Fluctuations in an Unstable System. II. (T) . . . . . B. A. Trubnikov and V. F. Eskin	873	47, 1291
The Connection between Operators in the Heisenberg and Interaction Represen- tations in Local Quantum Field Theory. (T) . . . . . V. L. Gurevich	881	47, 1303
An Approach to the Theory of the Low-temperature Bose Gas. (T) . . . . .	890	47, 1310
Kinetic Theory of Propagation of Strong Electromagnetic Waves in Semiconduc- tors and in a Plasma. (T) . . . . . V. N. Popov and L. D. Faddeev	895	47, 1322
On Molecular Gyromagnetism. (T) . . . . . F. G. Bass	906	47, 1342
On an Allowed Model in Quantum Electrodynamics. (T) . . . . .	908	47, 1344
The Effect of the Multiplicity of $d(f)$ Shells on Electron Interaction in Crystals. (T) . . . . . S. S. Sannikov and F. I. Dubovoi	914	47, 1355
Low-temperature Transport Properties of Metals with Paramagnetic Impurities. (T) . . . . . S. V. Vonskovskii and M. S. Vitskii	922	47, 1361
Theory of Transport Phenomena in Electron-phonon Systems in a Magnetic Field. (T) . . . . . L. E. Gurevich and I. N. Yassievich	929	47, 1368
	(Continued,	

Available From American Institute of Physics  
Soviet Physics - JETP  
Vol XX, No 4

	Page	Russian Reference
States of Zero-mass Fields with Non-scalar Phases. (T) . . . . . R. V. Smirnov	935	47, 1386
Quasilinear Theory of Instabilities Caused by Injection of an Electron Beam into a Semi-infinite Plasma. (T) . . . . . Ya. B. Faĭnberg and V. D. Shapĭro	937	47, 1389
Theory of Molecular Transformations Induced by Neutrons. (T) . . . . . G. K. Ivanov and Yu. S. Sayasov	947	47, 1405
Some Features of the Electrical Conductivity of Metals at Low Temperatures. (T) . . . . . R. N. Gurzhi	953	47, 1415
On Phase Transitions in a Model System. (T) . . . . . R. A. Suris	961	47, 1427
Nonlinear Interaction of Electromagnetic Waves in a Plasma. (T) . . . . . L. M. Gorbunov, V. V. Pustovalov, and V. P. Silin	967	47, 1437
Effect of Transverse Electromagnetic Wave Decay in a Plasma. (T) . . . . . L. M. Kovrizhnykh and V. N. Tsytovich	976	47, 1454
Production of Proton-antiproton Pairs in Colliding Electron-positron Beams. (T) . . . . . F. S. Sadykhov, I. G. Dzhaferov, and R. Sh. Yakh'yaev	984	47, 1463
Radiation Emitted by Charged Particles Scattered by Electromagnetic Waves in an Isotropic Plasma. (T) . . . . . A. Gailitis and V. N. Tsytovich	987	47, 1468
Coherence Relaxation during Diffusion of Resonance Radiation. (T) . . . . . M. I. D'yakonov and V. I. P. rel'	997	47, 1483
Bremsstrahlung in the Scattering of Neutrinos on Nuclei. (T) . . . . . M. S. Dubovikov	1005	47, 1496
Some Processes Involving High-energy Polarized Electrons and Positrons. (T) . . . . . Yu. G. Shakhnazaryan	1010	47, 1503
The Lie Equations for the Rotation Group. (T) . . . . . S. Datta Majumdar	1014	47, 1509
Diagram Technique for Nonequilibrium Processes. (T) . . . . . L. V. Keldysh	1018	47, 1515
The Pressure of an Intense Plane Wave on a Free Charge and on a Charge in a Magnetic Field. (T) . . . . . V. S. Voronin and A. A. Kolomenskii	1027	47, 1528
On the Theory of Ferromagnetism in Metals. (T) . . . . . P. S. Kondratenko	1032	47, 1536
Theory of Scattering of Neutrons in Disordered Crystals. (T) . . . . . I. A. Privorotskii	1037	47, 1544
Theory of Electron Capture in the Betatron. (T) . . . . . A. N. Matveev	1041	47, 1550
The Kinetics of Waves in a Weakly Turbulent Plasma. (T) . . . . . L. M. Al'tshul' and V. I. Karpman	1043	47, 1552
Effect of the Surface Layer and the Deformation of the Nucleus on the Reduced E0 Conversion Probability. (T) . . . . . L. A. Borisoglebov	1057	47, 1575

#### BRIEF COMMUNICATIONS

Isotope Effect and Proton Polarization in Elastic Scattering by Nickel Nuclei. (E) . . . . . V. I. Chirko	1061	47, 1581
Elastic Scattering of 13.6 MeV Deuterons by Gold and Bismuth Nuclei. (E) . . . . . A. N. Verezhchagin, L. S. Sokolov, and I. P. Chernov	1062	47, 1583
Study of the (p, p') Reaction with Excitation of 1.65 and 1.83 MeV Levels in Al <sup>27</sup> . (E) . . . . . S. S. Vasil'ev, T. N. Mikhaleva, and D. D. Chuprakov	1064	47, 1585

#### LETTERS TO THE EDITOR

Cadmium Surface Laser Excited by Fast Electrons. (E) . . . . . N. G. Basov, O. V. Bogdankevich, and A. G. Deryatkov	1067	47, 1588
Pulsed Laser Action in Molecular Hydrogen. (E) . . . . . P. A. Bazhulin, I. N. Knyazev, and G. G. Petrashev	1068	47, 1589
Compton Effect on Moving Electrons. (E) . . . . . O. F. Kulikov, Yu. Ya. Tel'nov, E. I. Filippov, and M. N. Yakimenko	1069	47, 1591
Ion Threshold Energy for a Two-stream Ion Instability. (E) . . . . . M. D. Gabovich and G. S. Kirichenko	1071	47, 1594
A Q-switched Optical Maser. (E) . . . . . N. G. Basov, R. V. Ambartsumyan, V. S. Zuev, P. O. Kryukov, and Yu. Yu. Stetsko	1072	47, 1595
Turbulent Heating of a Plasma in Linear Discharge. (E) . . . . . M. A. Babyskin, P. P. Gavrilin, E. K. Zavoiskii, L. I. Rudakov, and V. A. Skoryupin	1073	47, 1597
Spectral Distribution of the Effect of Quenching of the Recombination Radiation of Germanium by Infrared Light. (E) . . . . . I. K. Kikoin and Yu. P. Kozlov	1075	47, 1600
Concerning the Single-electron Approximation in Collision Theory. (T) . . . . . Ya. Damburg and R. K. Peterkop	1076	47, 1602

Available From American Institute of Physics  
 Soviet Physics - JETP  
 Vol XX, No 4

# JOURNAL OF GENERAL CHEMISTRY OF THE USSR

A translation of *ZHURNAL OBSHCHEI KHIMII*

A publication of the Academy of Sciences of the USSR

© 1963 CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N.Y.

Volume 34, Number 2

February, 1964

## CONTENTS

	P A G E	
	ENG.	RUSS.
Chemistry for the National Welfare . . . . .	365	365
Fusion Diagram of the Ternary System Urea-Phenol-Cinnamic Acid—I. I. Il'yasov, A. G. Palobekov, and A. G. Bergman . . . . .	370	367
Fusion Diagram of the Ternary System Urea-Phenol-8-Naphthol—A. G. Palobekov, I. I. Il'yasov, and A. G. Bergman . . . . .	373	370
Fusion Diagram of the Ternary System Urea-Naphthalene-8-Naphthol—I. I. Il'yasov, A. G. Palobekov, and A. G. Bergman . . . . .	377	374
Polarographic Investigation of Some Derivatives of 4'-Phenylacetophenone—V. D. Bezuglyi, V. N. Dmitrieva, I. A. Shkodina, and L. A. Mel'nik . . . . .	379	376
Cyclic Acetals of Hydroxy Carbonyl Compounds. XV. 4'-Chloro-2-Hydroxypropiophenone Methyl Lactolide [1-Chloro-4-(1,2-Epoxy-1-Methoxypropyl)Benzene] and Its Properties —T. I. Temnikova and N. S. Kirikova . . . . .	386	383
Cyclic Acetals of Hydroxy Carbonyl Compounds. XVI. Methyl Lactolides of ar-Substituted 2-Hydroxybutyrophenones—T. I. Temnikova and O. A. Kaurov . . . . .	389	386
Azodiformic Ester Adducts in the Synthesis of Bicyclic Compounds in Which Two Nitrogens are Held in Common by the Rings, Namely 2-Aryl-2,3,5,8-Tetrahydro-1H-s-Triazolo(a)Pyr- idazines and Their Derivatives—Yu. S. Shabarov, A. P. Smirnova, and R. Ya. Levina . . . . .	393	390
Synthesis and Reactions of Unsaturated Organosilicon and Organogermanium Compounds. XVII. Synthesis and Some Reactions of Diacetylenic Organosilicon and Organogermanium Alcohols—I. A. Shikhiev, B. M. Guseinzade, N. T. Mekhmandarova, and I. A. Aslanov . . . . .	397	394
Synthesis and Reactions of Unsaturated Organogermanium Compounds. XVIII. Synthesis of Acetylenic $\gamma$ -Germanium-Containing Di- and Tri-Hydric Tertiary Alcohols —I. A. Shikhiev and I. A. Aslanov . . . . .	400	397
Synthesis and Reactions of Unsaturated Organosilicon Compounds. XIX. Reaction of the Iotsich Reagent Derived from Certain Acetylenic Alcohols with Chloro(Chloromethyl)Dimethylsilane —I. A. Shikhiev, Sh. V. Garaeva, and M. I. Aliev . . . . .	402	399
Synthesis of 2-Thiophenealanine—G. V. Shishkin and V. P. Mamaev . . . . .	404	401

(Continued)

Available From Consultants Bureau

CONTENTS (Contd)	P A G E	ENG.   RUSS.
Use of Formyl Protection in the Synthesis of Lysine Peptides—L. V. Ionova and E. A. Morozova .	407	403
Potential Antimetabolites. XI. New Synthesis of Willardine—Yu. P. Shvachkin and M. T. Azarova . . . . .	411	407
Amines and Ammonium Compounds. XXI. Rearrangement-Cleavage of Ammonium Salts Containing $\alpha,\beta$ - and $\beta,\gamma$ -Unsaturated Groups—A. T. Babayan, M. G. Indzhikyan, and G. B. Bagdasaryan . . . . .	415	411
Amines and Ammonium Compounds. XXIII. Rearrangement-Cleavage, Under the Action of Aqueous Alkali, of Ammonium Salts Containing 2-Chloroethyl and Allyl-Type Groups —A. T. Babayan, M. G. Indzhikyan, G. B. Bagdasaryan, and N. M. Davtyan. . . . .	419	416
Substituted Hydrazides of Hydroxy Carboxylic Acids. XIII. 2,2-Dibenzylhydrazides of Diaryl- and Dialkyl-Glycolic Acids—L. S. Berdinskii. . . . .	424	421
Synthesis and Properties of Isomeric Naphthoxazoles Substituted in the 2-Position —L. N. Pushkina and I. Ya. Postovskii . . . . .	427	424
Condensation of Vinyl Ethers with Amides of Substituted Carboxylic Acids. I. —S. V. Adomaitene, A. M. Sladkov, and V. P. Shishkov. . . . .	434	432
Synthesis of Alkyl and Aryl Bis- $\beta,\beta'$ -Dichloroisopropyl Phosphites—P. A. Kirpichnikov, Gil'm Kamal, and R. Sh. Khisamutdinova. . . . .	437	434
Dialkyl 1-Naphthyl Phosphites—Gil'm Kamal and A. S. Khasanov . . . . .	440	437
Synthesis of Some p-Tolyl(Trichloromethyl)Phosphinic Esters—Gil'm Kamal and R. K. Ismagilov. .	442	439
Amino Derivatives of 2-(3,4-Methylenedioxyphenyl)-1,3-Indandione—A. K. Aren, U. Ya. Mikstais, and G. Ya. Vanag. . . . .	445	442
Imines of Di- and Poly-Ketones. XIII. Ultraviolet Absorption Spectra of 1,3-Indandione Imines and 3-Aminoindones—Ya. F. Freimanis and G. Ya. Vanag . . . . .	448	445
Imines of Di- and Poly-Ketones. XIV. Infrared Absorption Spectra, Structure, and Tautomerism of 3-Aminoindones—Ya. F. Freimanis and G. Ya. Vanag . . . . .	455	452
Spatial Structures of Isomeric 2,5-Dimethyl- and 1,2,5-Trimethyl-4-Phenyl-4-Piperidinols —N. S. Prostakov, B. E. Zaitsev, N. M. Mikhailova, and N. N. Mikheeva. . . . .	465	463
Synthesis of 4-Oxo- and 4-Hydroxy-2,5-Dimethyl-1-Piperidinecarbodithioic Acids and 1,2,5- Trimethyl-4-Piperidinethione—N. S. Prostakov, I. T. Gridunov, N. L. Marshavina, and V. G. Rodionova . . . . .	469	467
Syntheses Based on $\gamma$ -Keto Alcohols. I. 2-(2-Acetoxyethyl)-3-Chlorocrotonaldehyde and Its Reactions—M. A. Volodina, A. P. Terent'ev, L. G. Roshchupkina, and V. G. Mishina . . . .	472	469
Syntheses based on $\gamma$ -Keto Alcohols. II. 3-Chloro-2-(2-Chloroethyl)Crotonaldehyde and Its Reactions—M. A. Volodina, A. P. Terent'ev, V. A. Kudryashova, and V. G. Mishina. .	476	473
Glycol Ethers and Their Derivatives. LXVI. Synthesis of 2-[(Alkoxyethoxy)methyl]Furans —Shamkhal Mamedov, M. A. Avanesyan, and B. M. Alieva . . . . .	480	478
Glycol Ethers and Their Derivatives. LXVIII. 1,3-Bis(Alkoxyethoxy)Butanes and 1,2-Bis(Alk- oxy)ethoxy)Propanes—Shamkhal Mamedov and Yu. V. Pokonova . . . . .	484	482
Absorption Spectra and Halochromism of Nitromethoxy and Dinitro Derivatives of Furenic Analogues of Chalcone and Their Vinylogs—A. I. Artemenko, S. V. Tsukerman, and V. F. Lavrushin . . . . .	489	487
Derivatives of 7-Azaindole. IV. Reaction of Trichlorocollidine and Dichloroxycollidine with Aliphatic-Aromatic Amines—L. N. Yakhontov and M. V. Rubtsov . . . . .	492	493
Condensed Heterocycles. VI. Concerning the Mechanism of Formation of the System 6-Oxo-1,2,4-Triazolo(2,3- $\alpha$ )Pyrimidine—Ya. A. Levin, A. P. Fedotova, and V. A. Kukhtin. .	501	499
Condensed Heterocycles. VII. Synthesis and Transformations of Some 4-Substituted 6-Methyl-1,2,4-Triazolo(2,3- $\alpha$ )Pyrimidines—Ya. A. Levin and V. A. Kukhtin . . . . .	504	502
Reduction of Naphtholcarboxylic Acids. X. Preparation of 6-Acetamino-2-Tetralone and the Methyl Ester of 6-Acetamino-2,3-Tetralonecarboxylic Acid —N. M. Przhivalgovskaya, V. F. Shner, and V. N. Belov. . . . .	510	508

(Continued)

Available From Consultants Bureau

CONTENTS (Contd)

	P A G E	ENG.   RUSS.
Phenyldialkylphosphazosulfonylphenyls—G. K. Fedorova and G. A. Lanchuk . . . . .	513	511
Synthesis of Carboxylic Acids Via Furan Derivatives. VIII. Cleavage of $\alpha$ -(2-Furyl)Ethylamine and Preparation of Optically Active Benzoylalanine—A. P. Terent'ev, R. A. Gracheva, and L. F. Titova. . . . .	516	513
Stereochemical Investigations. XVII. Rotatory Dispersion of 1,2-Diphenylethanol—V. M. Potapov and A. P. Terent'ev . . . . .	518	516
Nitration of 1,8-Dimethylnaphthalene and Synthesis of Some of Its Nitro and Amino Derivatives—L. I. Denisova, N. A. Morozova, V. A. Plakhov, and A. I. Tochilkin. . . . .	521	519
Derivatives of Phenoxydichlorophosphazacyls—G. I. Derkach and A. M. Lepesa . . . . .	527	525
Reactions of Phosphonitrile Chloride Trimer. II. Reaction of Phosphonitrile Chloride Trimer with Ethyl Glycinate—A. A. Kropacheva, N. M. Kashnikova, and V. A. Parashina. . . . .	532	530
Investigations in the Field of the Chemistry of Unsaturated Stanohydrocarbons. IV. Dipole Moments of Alkyl, Alkenyl, and Phenylacetylenic Stanohydrocarbons—A. A. Petrov, K. S. Mingalova, and V. S. Zavgorodni . . . . .	535	533
Syntheses in the 5-Hydroxychromone Series—A. A. Shamshurin and M. A. Yampol'skaya . . . . .	538	535
Reactions of Derivatives of Chromone-2-Carboxylic Acid with Amines—V. A. Zagorevskii, D. A. Zykov, and É. K. Orlova . . . . .	541	539
Investigations in the Field of Plasmalogens. I. Synthesis of 1,2-Isopropylideneglyceryl-hepten-1'-yl-1' Ether—M. V. Berezovskaya, I. K. Sarycheva, and N. A. Preobrazhenskii . . . . .	545	543
Synthetic Investigations in the Field of Curare Alkaloids. XI. Synthesis of 5-Bromosubstituted $\beta$ -Phenylethylamines—O. N. Tolkachev, V. P. Chernova, E. V. Kuznetsova, Pao Fang-ling, and N. A. Preobrazhenskii . . . . .	547	545
Synthetic Investigations in the Field of Curare Alkaloids. XII. Synthesis of 1-(4'-Hydroxybenzyl)-6-Methoxy-7-Alkoxy-8-Bromo-3,4-Dihydroisoquinolines—O. N. Tolkachev, E. B. Yagubskii, L. T. Dorofeeva, and N. A. Preobrazhenskii . . . . .	550	548
Polyynic Compounds with a Central Methylene Group. Synthesis of Heptadiyne-1,4 and Undecatriyn-2,5,5-Ol-1—A. A. Kraevskii, N. V. Fedorova, S. A. Zotova, I. K. Sarycheva, and N. A. Preobrazhenskii . . . . .	553	552
Investigations in the Field of Complex Lipids. Preparation of Phosphorylated Derivatives of N-Phthaloylserine—V. M. Polyachenko and G. I. Samokhvalov . . . . .	556	554
S-Derivatives of Thiourea. VIII. Synthesis of 2-Hydroxy-5-Isothiuroniummethylthiazoline—V. M. Fedoseev and L. N. Litvinov . . . . .	558	557
Some Properties of Enolacetates. X. Phenoxylation of Ketones by Reaction of Their Bromine-Substituted Enolacetates with Sodium Phenate—T. K. Veselovskaya, I. V. Machinskaya, and A. K. Nadelyaeva . . . . .	561	560
Destructive Hydrogenation of Polyesters of $\omega$ -Hydroxycarboxylic Acids to $\alpha, \omega$ -Diols—S. G. Polyakova and V. N. Belov . . . . .	566	565
New Method of Transformation of the Aldehyde Group to the Nitrile Group—I. I. Grandberg . . . . .	570	569
Ionization and Dissociation during Electronic Bombardment of $\alpha$ -Fluoronitriles with Increasing Length of Alkyl Chain—F. N. Chelobov, S. S. Dubov, M. V. Tikhomirov, P. O. Gitel', and A. Ya. Yakubovich . . . . .	572	571
Synthesis of N,N'-Diaryl- $\beta$ -Aminopropionamides—A. A. Michurin and E. N. Zil'berman . . . . .	576	575
Concerning the Behavior of Bromo Derivatives of Adamantane Towards Metals—F. N. Stepanov and V. F. Baklan . . . . .	580	579
Comparative Hydrogenation of Oxides of Erucic and Brassidic Acids—Z. Ya. Rubashko . . . . .	585	584
Mam Spectra and Structure of Some Polyfluorinated Compounds Containing a Nitrogen-Nitrogen Bond—S. S. Dubov and A. M. Khokhlova . . . . .	587	586
Some Reactions of N,N-Di-( $\beta$ -Cyanoethyl)-Sulfanilamide—P. F. Butkus and R. Yu. Stonits . . . . .	590	589

(Continued)

Available From Consultants Bureau

ZHURNAL OBSHCHEI KHIMII  
Vol XXXIV, No 2, 1964

CONTENTS (Contd)

	P A G E	
	ENG.   RUSS.	
Some Reactions of N-Cyanoethylated $\alpha$ -Aminoacids and Their Derivatives—P. F. Butskus and N. V. Razuotene . . . . .	594	593
The Stability to Hydrolysis of Phenylphenoxy- and Phenyl-(Biphenyloxy)-Silanes —A. G. Kuznetsova and M. V. Sobolevskii . . . . .	599	598
Reaction of Aroyl Azides with Phosphites and Phosphines—G. I. Derkach and E. S. Gubnitskaya. . . . .	605	604
Reaction of Unsymmetrical Dialkyl and Alkyl Aryl Esters of Oxalic Acid with Phosphorus Pentachloride—Ya. N. Ivashchenko and S. D. Moshchitskii . . . . .	610	609
Study of the Mechanism of the Rearrangement of Nitraminopyridine with the Aid of N <sup>18</sup> —B. A. Geller and L. S. Samospat . . . . .	614	613
Synthesis of Chlorides of Silicon-Containing Arylcarboxylic Acids—G. N. Mal'nova and E. P. Mikheev . . . . .	618	617
Aminocolchicide Derivatives. IV. —V. V. Kiselev . . . . .	620	619
Syntheses in the Phenothiazine Series. XIII. The Selective Reduction of 10-Methyl-3-Nitro- phenothiazine-5-Oxide—V. A. Skorodumov, N. K. Shagako, and S. V. Zhuravlev . . . . .	623	621
Bis-(2,3-Dibromopropyl) and Di-(2-Bromoallyl) Esters of Arylsulfonylphosphoramidic Acids —V. I. Shevchenko, V. P. Tkach, and A. V. Kirsanov . . . . .	626	624
Alkylation of Amines. IV. Alkylation of 4-Amino-1,3-Dimethylbenzene with Isopropyl Alcohol—N. V. Ponomarev and S. I. Burmistrov . . . . .	629	627
The Nature of the Interaction of the Phenyl and Imidazole Rings in the N-Arylimidazoles. II. Electronic Absorption Spectra of N-Substituted Imidazoles and Benzimidazoles —A. F. Pozharskii . . . . .	632	630
Fluorescein Sulfonic Acids. III. The Sulfonation of Fluorescein—I. S. Ioffe and L. A. Roskulyak Studies in the Field of Rhodamine Dyes and Compounds Related to Them. IX. Sulfonic Acids of Rhodamine B and Their Derivatives—I. S. Ioffe, N. I. Devyatova, and I. A. Gofman . . . . .	638	635
Oxycarbocyanines with $\alpha$ -Naphthyl and $\alpha$ -Thienyl Groups in the 5,5'-Positions —M. A. Al'perovich and L. T. Bogolyubskaya . . . . .	642	640
Studies on Pyrazoles. XL. Kinetic Studies on the Mobility of a Halogen Atom Bound to the Pyrazole Nucleus—L. I. Gorbacheva, I. I. Grandberg, and A. N. Kost . . . . .	647	645
Studies on Pyrazoles. XLI. IR spectra and Tautomerism in the Aminopyrazole Series —V. G. Vinokurov, V. S. Troitskaya, and I. I. Grandberg . . . . .	652	650
Investigation of the Mechanism of the Cyclization of Arylhydrazones of Cyclohexanone Using Heavy Nitrogen—B. A. Geller and L. K. Skrunts . . . . .	657	654
Investigation in the Field of Free Radical Chemistry of the Hydrazine Series. XVI. $\alpha, \alpha$ - Diphenyl- $\beta$ -2,4,6-Trimethylphenylhydrazine and Its Properties—R. O. Matevosyan and M. A. Ikrina . . . . .	663	661
Investigation in the Field of Theoretical Chemistry of the Hydrazine Series. XVII. Synthesis of $\alpha$ -Phenyl- $\alpha$ -(4-Methoxyphenyl)- $\beta$ -Triphenylmethylhydrazyl, $\alpha$ -Phenyl- $\alpha$ - (4-Methoxyphenyl)- $\beta$ -Tri(p-Nitrophenyl)methylhydrazyl, and Investigation of Their Properties—R. O. Matevosyan and M. A. Ikrina . . . . .	667	664
Ultraviolet Absorption Spectra of Certain Nitrogen Compounds of 2,2'-Dithienyl. IV. —A. E. Lipkin, N. I. Putokhin, and B. V. Rassadin . . . . .	671	668
Reaction of Benzoyl Peroxide with Organomercury Compounds—G. A. Razuvaev, N. S. Vyazankin, and E. V. Mitrofanova . . . . .	674	671
Investigations in the Fields of Arylhydrazones of Substituted Phenylglyoxylyl Chlorides. II. Reaction of Arylhydrazones of Phenylglyoxylyl Chloride with Nucleophilic Agents —R. G. Dubenko and P. S. Pel'kis . . . . .	678	675
	682	679

(Continued)

Available From Consultants Bureau



ZHURNAL OBSHCHEI KHIMII  
Vol XXXIV, No 2, 1964

CONTENTS (Contd)

P A G E  
ENG. | RUSS.

Synthesis and Investigation of Trimethylenetrisulfone Derivatives. I. 2,4,6-Triarylhydrazones of Trimethylene-1,3,5-Trisulfone—R. G. Dubenko, Yu. V. Tanchuk, and P. S. Pelkis . . . . .	685	682
Alkylation of 2-Amino-4-Methylthiazole by Secondary and Tertiary Alcohols—S. I. Burmistrov and V. A. Krasovskii . . . . .	687	685
Synthesis of Quaternary Ammonium Salts of N,N'-Derivatives of Ethylenediamine—V. P. Denisenko and A. I. Lopushanskii . . . . .	690	688
6-Methylphosphinit of 1,2;3,4-Diisopropylidenegalactose—K. A. Petrov, É. E. Nifant'ev, A. A. Shchegolev, and A. P. Tuseev . . . . .	692	690
Vinylation of Acetone Derivatives of Sorbitol and Dulcitol—B. I. Mikhant'ev and V. L. Lapenko . . . . .	696	694
Stereochemistry of Cyclohexanedicarboxylic Acids. II. Stereochemistry of the Catalytic Hydrogenation of the Dimethyl Ester of Cyclohexanedicarboxylic-1,4 Acid to Cyclohexanedimethanol-1,4—G. S. Gurevich, S. Z. Levin, and I. S. Diner . . . . .	699	696
 LETTERS TO THE EDITOR		
Synthesis of $\beta$ -Oxides of the Acetylene Series—T. A. Favorskaya and Yu. M. Portnyagin . . . .	702	699
Study of the Activity of Acetals of Dimethylformamide—M. Yu. Kornilov and Z. Arnold . . . .	703	700
Synthesis and Certain Properties of Silanes with Dinitrilealkyl Radicals—E. B. Dmokhovskaya, A. L. Klebanskii, and A. I. Ponomarev . . . . .	705	702
Reaction of N-Alkyl Derivatives of Sydnoneimines with Acrylonitrile—V. F. Vasil'eva and V. G. Yashunskii . . . . .	706	702
Synthesis of 1,1-Diphenyl- $\omega$ -Dialkylaminoalkanone-2-Ols-1—D. V. Ioffe and I. N. Som'in . . .	707	703
N-Alkylation of Aminodesoxysugars—V. I. Veksler, L. N. Kovalenko, and A. V. Markovich . .	708	704
Interaction of 5-Bromo-2-Nitrofurane with Amines—Z. N. Nazarova, V. N. Novikov, and V. Ts. Bukhaeva . . . . .	710	705
Echinocystic Acid in the Roots of <i>Chenopodium anthelminticum</i> L. —A. S. Danilova, L. P. Barabanova, and A. A. Ryabinin . . . . .	711	706
Reaction of Sodium Methylate in Methanol Solution with Aliphatic-Aromatic $\alpha$ -Haloketones—T. I. Temnikova and O. A. Kaurov . . . . .	712	707
 DISCUSSION		
Diels-Alder Reaction in Partial Asymmetric Synthesis—A. I. Korolev, V. I. Mur, and V. G. Avakyan . . . . .	713	708

Available From Consultants Bureau

# JOURNAL OF GENERAL CHEMISTRY OF THE USSR

A translation of *ZHURNAL OBSHCHEY KHIMII*

A publication of the Academy of Sciences of the USSR

© 1965 CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N.Y.

Volume 34, Number 3

March, 1964

## CONTENTS

	P A G E	E N G.   R U S S .
Properties of the Layer-Separation Field in the System Water-Pyridine-Aniline —R. V. Mertalin and N. I. Nikurashina . . . . .	717	715
Physicochemical Investigation of Binary Systems Formed by Acetamide with Cresols —I. M. Bokhovkin . . . . .	720	718
Physicochemical Investigation of the Ternary System Urea-Chloroacetic Acid-Trichloroacetic Acid—Yu. I. Bokhovkina, I. M. Bokhovkin, and E. O. Vitman . . . . .	724	723
Physicochemical Analysis of the Ternary System Phenol-Acetamide-Trichloroacetic Acid —I. M. Bokhovkin, Yu. I. Bokhovkina, and E. O. Vitman . . . . .	728	727
Physicochemical Analysis of the Ternary System Urea-β-Naphthol-Acetamide —Z. K. Dzhelomanova, N. Z. Rudenko, and N. K. Topal . . . . .	732	731
Polarographic Behavior of Dicyclopentadienyltitanium Dichloride—I. A. Korshunov and N. I. Malyugina . . . . .	735	734
Reactions of Carbenes with Dienic, Enynic, and Diynic Systems. I. Reaction of Dichloro-, Dibromo-, and (Ethoxycarbonyl)-Carbenes with 2-Methyl-1-Penten-3-Yne —I. A. D'yakonov and L. P. Danilkina . . . . .	738	738
Synthesis of C <sub>8</sub> -C <sub>11</sub> t-Alkyl Hydroperoxides—M. R. Vilenskaya and T. I. Yurzhenko . . . . .	747	748
Aromatic Hydrocarbons. XXIX. Stereoisomeric Tetrahydrophthalic Acids and Anhydrides in Reaction with Phosphorus Pentoxide—V. R. Skvarchenko, T. S. Sukhareva, and R. Ya. Levina . . . . .	751	752
Use of Formals as Media for Organomagnesium Synthesis—M. F. Shostakovskii, M. R. Kulibekov, A. K. Gorban', and S. M. Shostakovskii . . . . .	759	760
Substituted Hydrazides of Hydroxy Carboxylic Acids. XIV. 2-Acyl-2-Phenylhydrazides of Diaryl- and Dialkyl-Glycolic Acids in Which the Acyl Group has a Basic Character —I. S. Berdinskii . . . . .	761	762
Basic Character of the Furan Nucleus—Z. N. Nazarova and V. N. Novikov . . . . .	766	767
Synthesis of Tetrapeptides—L. V. Ionova, D. D. Mozhukhin, and E. A. Morozova . . . . .	768	769

(Continued)

Available From Consultants Bureau

CONTENTS (continued)

	P A G E	ENG.   RUSS.
Glycol Ethers and Their Derivatives. LXIX. Synthesis of N-Substituted 2-(Alkoxyethoxy)-Ethylamines—Shamkhal Mamedov and A. K. Arabov . . . . .	771	772
Glycol Ethers and Their Derivatives. LXX. Synthesis of (1,2-Bisalkoxymethoxyethyl)Benzenes—Shamkhal Mamedov, É. Sh. Mamedov, and D. N. Khydyrov . . . . .	776	777
Chromatographic Separation of Asymmetric Quaternary Arsonium Salts into Their Optically Active Enantiomers, and Study of Their Racemization Rates—Gil'm Kamai and Yu. F. Gatilov . . . . .	781	782
Separation of Asymmetric Phosphonium Compounds into Their Enantiomers with the Aid of Silver Hydrogen (-)-Dibenzoyltartrate—Gil'm Kamai and G. M. Usacheva . . . . .	784	785
Tetracyclines. XXIII. New Ways of Building the A Ring of Dedimethylaminotetracyclines—Yu. A. Berlin, Yu. P. Volkov, M. N. Kolosov, Yu. A. Ovchinnikov, T'ao Chéng-o, and M. M. Shemyakin . . . . .	789	790
Tetracyclines. XXIV. Building of the A Ring of Tetracyclines—Yu. A. Berlin, M. N. Kolosov, and M. M. Shemyakin . . . . .	796	798
2-Aryl-2-(Iodomethyl)-1,3-Indandiones and Their Reaction with Tertiary Heterocyclic Amines—R. É. Valter and G. Ya. Vanag . . . . .	804	808
Ultraviolet Absorption Spectra of Cyclopentanediones-1,3—É. Ya. Gren and G. Ya. Vanag . . . . .	808	812
Ultraviolet Absorption Spectra of Cyclopentene-4-Diones-1,3. I.—É. Ya. Gren and G. Ya. Vanag . . . . .	813	817
Ultraviolet Absorption Spectra of Cyclopentene-4-Diones-1,3. II.—É. Ya. Gren and G. Ya. Vanag . . . . .	818	823
Investigations on the Dieckmann Reaction. III. Cyclization of Diethyl Esters of $\beta$ -Carbethoxy- and $\beta,\beta$ -Dicarbethoxyadipic Acid—N. S. Vul'fon and V. I. Zaretskii . . . . .	823	828
Synthesis of $\alpha,\beta$ -Unsaturated Ketones on the Basis of Quinaldinealdehyde—S. V. Tsukerman, Ch'ang Kuok Shuon, and V. F. Lavrushin . . . . .	827	832
Synthesis of Derivatives of Benzil-o-Carboxylic Acid—L. P. Zalukaev and D. G. Vnenkovskaya . . . . .	832	838
Addition of Acylacetic Esters to 2-Arylideneindanediones-1,3—L. P. Zalukaev and I. K. Anokhina . . . . .	834	840
Heterocyclic Compounds. I. Reaction of $\gamma$ -Piperidones with Organolithium Compounds—A. Sh. Sharifkanov, T. M. Mukhametkaliev, and N. A. Gafarova . . . . .	837	843
The Chemistry of Selenophene. XLIX. Reactions of 3-Bromoselenophene—Yu. K. Yur'ev, N. K. Sadovaya, and E. A. Grekova . . . . .	841	847
Study of Complex Compounds of Alkyl- and Polyalkylchlorophosphines with Aluminum Chloride. III. Preparation of Complex Compounds of Trialkyldichlorophosphines with Aluminum Chloride and Their Reduction—S. Z. Ivin, K. V. Karavanov, and V. V. Lysenko . . . . .	846	852
Investigations of Heterocyclic Compounds. XXXV. Utilization of Polyphosphoric Acid for Synthesis of Quinazolinic Compounds—P. A. Petyunin and Yu. V. Kozhevnikov . . . . .	848	854
Synthesis of Esters of $\beta$ -Naphthylphosphorous Acid—P. A. Kirpichnikov, Ya. A. Gurchik, and M. V. Ivanova . . . . .	850	856
Mono- and Difluorophosphites—Zh. M. Ivanova . . . . .	852	858
Synthesis of Chalcones on the Basis of $\beta$ -Chlorovinyl Ketones—V. F. Belyaev . . . . .	856	861
Synthesis of Some 2-Hydroxy-5-Alkoxybenzophenones—N. A. Larin, E. N. Matveeva and T. G. Petrova . . . . .	859	864
Vinyl Esters of Phosphorus Acids. III. Acid Chlorides of $\alpha$ -Alkenyl Esters of Alkylphosphinic Acids—Yu. G. Gololobov, T. F. Dmitrieva, and L. Z. Soborovskii . . . . .	861	866
Catalytic Reduction of Aromatic Nitro Compounds. XIII. Kinetics and Mechanism of Reduction of Nitrobenzene Over Palladium—V. P. Shmonina and R. M. Abdrabmanova . . . . .	864	869
Addition Reactions of Alkylenglycolphosphorous and Thiophosphorous Acids—A. N. Fedorik and G. A. Golitsyna . . . . .	870	876

(Continued)

Available From Consultants Bureau

# CONTENTS (continued)

	P A G E	ENG.   RUSS.
The Mechanism of Reactions of Phosphorus Acid Chlorides with Oxides of Alkenes and Dienes —A. N. Pudovik and É. M. Faizullin . . . . .	876	882
Diphosphonoglycols, Diphosphonodiamines, and Some of Their Reactions—A. N. Pudovik and G. I. Evstaf'ev . . . . .	883	890
Synthesis of 2,4-Dimethyl-3-( $\beta$ -Diethylaminoethyl)-5-Carboxypyrrole and its Derivatives —A. M. Fargali, R. P. Evstigneeva, I. N. Khandil, and N. A. Preobrazhenskii. . . . .	886	893
Synthesis of 2,2'-(3,3'-Bis( $\beta$ -Diethylaminoethyl)-4,4'-Dimethyl)-Dipyrrylmethane —A. M. Fargali, R. P. Evstigneeva, and N. A. Preobrazhenskii . . . . .	891	898
Condensation of Azulenes with Carboxylic Acid Anhydrides—F. N. Stepanov and A. G. Yurchenko Some Transformations of Methyleneethanolamine Acetate and Anhydroformaldehydeaniline —K. D. Petrov and G. V. Kryuchkova . . . . .	894	901
Preparation and Some Transformations of $\alpha$ -Aminoalcohols of the Naphthalene Series —K. D. Petrov and R. G. Tikhomirova . . . . .	899	907
The Formation of Polycyclosilazanes in the Ammonolysis of Dimethyldichlorosilane —K. A. Andrianov, Ionel Khaiduk, and L. M. Khananashvili . . . . .	902	909
The Reaction of Hexaalkyldisilazanes with Carboxylic Acids and Dihydric Phenols —K. A. Andrianov, V. V. Astakhin, and B. P. Nikiforov . . . . .	905	912
Production of Vinyl 2-Puryl and Vinyl 2-Thienyl Ketones—M. I. Shevchuk and A. V. Dombrovskii Arylamides of Aliphatic Amino Acids. III. p-N-Di-(Chloroethyl)-Aminophenylamides of Some Amino Acids—T. S. Safonova and S. I. Sergievskaya . . . . .	908	914
Synthesis of 5-Chloro-6-Iodoacenaphthene and the Products of its Oxidation—A. P. Karishin and D. M. Kustol . . . . .	910	916
$\alpha$ -Puryl $\beta$ -(Arylamino)-Alkyl Ketones—N. S. Koslov and I. P. Sonich . . . . .	913	919
Reaction of Tetraethyllead with Phosphorus Trichloride or Methylphosphonous Dichloride and Oxygen—Yu. M. Zinov'ev and L. Z. Soborovskii . . . . .	917	924
Aromatic Fluorine Derivatives. XII. The Reaction of Fluorohalogenobenzenes with Aluminum Chloride—G. G. Yakobson, V. D. Shteingarts, and G. A. Berezovskii . . . . .	920	927
Aromatic Fluorine Derivatives. XIII. Hydrolysis of Fluorohalogenobenzenes—G. G. Yakobson, T. D. Rubina, and N. N. Vorozhtsov, Jr. . . . .	923	929
Dipole Moments of Complexes of Mercuric Bromide with Organic Sulfides—N. K. Faizullina and E. N. Gur'yanova . . . . .	926	932
A Study of the Reactivity of $ArPhX_2$ Compounds. Reaction with $(C_6H_5)_3Sb$ —V. I. Podochnikova, E. M. Panov, and K. A. Kocheshkov . . . . .	930	936
Synthesis of Unsymmetrical Aliphatic-Alicyclic Compounds of Tin—G. F. Rubinchik and Z. M. Manulkin . . . . .	935	941
Studies on the Derivatives of 2-Mercaptobenzothiazole and Dithiocarbamic Acids. II. Reactions of Benzothiazolyl Esters of Dithiocarbamic Acids—O. M. Cheratov, É. A. Khalykh and E. N. Gur'yanova . . . . .	940	946
Studies in the Field of Imidazole Derivatives. XXXII. Synthesis of 4,5(6,7)-Quinones of Benzimidazole—É. R. Zakhs and L. S. Éfros . . . . .	943	949
Studies in the Field of Imidazole Derivatives. XXXIII. Synthesis of 6,7-Quinones of Benzimidazole—É. R. Zakhs and L. S. Éfros . . . . .	945	952
Bromination and Chloromethylation of Thiophen-2-Aldehyde in the Presence of an Excess of Aluminum Chloride—Ya. L. Gol'dfarb, Yu. B. Vol'kenshtein, and S. V. Lopatin . . . . .	949	956
Synthesis of 4'-Substituted Derivatives of 4-Vinylbiphenyl—M. I. Dovgozhaya and R. S. Mil'man Synthesis and Reactions of Parao Derivatives. 1. Synthesis and Reactions of 3-Amino-4- (2'-Puryl)-Thiazole—N. O. Saldaboi and A. Ya. Medne . . . . .	955	962
	961	969
	969	977
	972	980

(Continued)

Available From Consultants Bureau

## CONTENTS (continued)

	P A G E ENG.   RUSS.
Synthesis and Properties of Derivatives of 2-Mercaptobenzothiazole. III. Investigation of Benzothiazol-2-Ylmercaptoacetic Acid—V. M. Svetlaeva, E. A. Kuznetsova and S. V. Zhuravlev . . . . .	975      983
Studies in the Thiazoline and Thiazolidine Series. III. Synthesis of 3-Alkylthiazolid-2-Ones—K. K. Kuz'mina, N. G. Ostroumova, Yu. V. Markova, and M. N. Shchukina . . . . .	978      987
Synthesis of Thiourea Derivatives. III. Piperazinythiocarbamides and Arylthiocarbamoylpiperazines—N. B. Galstukhova and M. N. Shchukina . . . . .	980      989
The Synthesis of Alkyl Thiophenols—A. M. Kuliev, A. B. Kuliev, and F. N. Mamedov . . . . .	984      993
Anthraquinone Derivatives. III. The Synthesis of Fluorine Substituted Anthraquinone-2-Carboxylic Acid and 2-Aminoanthraquinone—N. S. Dokunikhin, B. V. Salov, and A. S. Glagoleva . . . . .	987      995
Derivatives of Naphthothiazinidine—A. E. Krelov and A. S. Bepalyi . . . . .	991      999
The Synthesis of 5,8-Diodoacenaphthene and its Oxidation Products—A. P. Karishin and D. M. Kustol . . . . .	994      1001
The Reactions of Tetrapropyl and Tetraisopropyl Tin with Benzoyl Peroxide—N. S. Vyazankin, G. A. Razuvaev, and T. N. Brevnova . . . . .	998      1005
2,3-Dimercaptopropylamine and its Derivatives. I. Synthesis of N-Mono- and N,N-Dialkyl Derivatives of 2,3-Dimercaptopropylamine—A. G. Tarasenko, V. M. Fedoseev, and A. B. Silaev . . . . .	1002      1009
Studies in the Series of Allo- and Isoalloxazine. XI. Synthesis of Riboflavin and Lumiflavin—V. M. Berezovskii and G. D. Glebova . . . . .	1007      1014
Partial Synthesis of Cardiac Glycosides. Convallatoxin and Convallatoxinol—V. T. Chernobai . . . . .	1010      1018
The Lactones of <i>Peucedanum mogoltavicum</i> Korov—G. K. Nikonov and V. B. Kuvaev . . . . .	1013      1020
The Alkaloids of <i>Leptorhabdos parviflora</i> Benth—A. V. Bocharnikova and P. S. Mamgatov . . . . .	1017      1025
<b>LETTERS TO THE EDITOR</b>	
Determination of the Heat of Fusion of Hexamethylenediamine—G. D. Efremova and A. V. Serebryakova . . . . .	1020      1028
The Reduction of Carboxylic Acids to Aldehydes by Diisobutyl Aluminum Hydride—L. I. Zakharkin and I. M. Khorilina . . . . .	1021      1029
The Structure of the Pyrimidine Base in Albomycin—N. A. Poddubnaya, G. I. Lavrenova, and T. M. Andronova . . . . .	1022      1030
The Diene Synthesis Reaction with Esters of $\alpha$ - and $\beta$ -Carbomethoxyvinyl Phosphonic Acid—A. N. Padovik and R. G. Kusoviya . . . . .	1024      1031
<b>DISCUSSION</b>	
The Composition and Structure of Salts of Diamines and Dicarboxylic Acids—Ya. A. Kharit . . . . .	1028      1032
Reactions of N,N-Di( $\beta$ -Cyanoethyl)Arylsulfamides—N. F. Butina and R. Ya. Stonin . . . . .	1029      1034

Available From Consultants Bureau

# JOURNAL OF APPLIED CHEMISTRY OF THE USSR

A translation of (ZHURNAL PRIKLAĐNOI KHIMII)  
a publication of the Academy of Sciences of the USSR

© 1965 CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N. Y.

Volume 37, Number 4

April, 1964

## CONTENTS

	P A G E	
	ENG.	RUSS.
Effect of Stirring of Catalyst on the Conversion of Methanol to Formaldehyde in a Fluidized Bed—I. P. Mukhlenov, A. Ya. Averbukh, and A. I. Vitvitskii . . . . .	711	705
Crystallization of Salts from Aqueous Solutions at Various Temperatures—L. N. Matusevich and N. P. Blinova. . . . .	716	710
Composition and Structure of Natural Calcium Phosphates—R. P. Ozerov, L. B. Grinshpan, G. I. Bushinskii, and M. E. Kuperman. . . . .	722	716
The Problem of Using an Iron Catalyst in the Contact Tower Process—I. M. Eiselev, I. P. Mukhlenov, and D. G. Traber. . . . .	727	722
Radiation-Chemical Formation of Nitrogen Oxide in the System Nitrogen-Oxygen at Elevated Temperatures—M. T. Dmitriev and Yu. A. Sorokin . . . . .	732	727
Spectrophotometric Determination of pH values at the Start of the Solution and Precipitation of Dysprosium Hydroxide—P. N. Kovalenko and K. N. Bagdasarov. . . . .	739	735
The Extraction of Gallium from Alkaline Solutions by Means of Sulfides—A. T. Nizhnik and Z. V. Shekhter. . . . .	746	742
Some Physical Properties of m-Chlorophenyl Isocyanate—N. A. Gol'dberg, V. A. Gorbushenkov, and Z. G. Teplova . . . . .	750	745
The Thermal Decomposition of Trichloromethyltrichlorosilane—G. V. Mutsarev and V. P. Rozenberg. . . . .	753	747
The Influence of the Concentration and Crystallization of $TiO_2$ on the Chemical Stability of Titanium Enamels—V. V. Vargin and B. Z. Pevzner. . . . .	755	749
The Density of Solutions of Dinitrogen Tetroxide in Concentrated Nitric Acid—M. M. Karavaev and V. A. Zhantalai. . . . .	761	756
The Influence of the Structure of Weakly Acidic Cation Exchange Resins on Their Stability Towards the Action of Radiation—A. M. Semushin and I. A. Kuzin . . . . .	765	760
The Sorption of Uranium and Thorium from Ammonium Thiocyanate Solutions by ÉDÉ-10P Anion Exchange Resin—I. A. Kuzin and V. P. Taushkanov. . . . .	769	764
An Analysis of the Chemical Reactions Involved in the Siliciding of Steel, on the Basis of Thermodynamic Data—V. K. Titov . . . . .	773	768
The Protection of Titanium Carbide from Oxidation in an Atmosphere of Air at 1200°—M. V. Sazonova and I. B. Dan'kovskaya . . . . .	778	773

(Continued)

Available From Consultants Bureau

**ZHURNAL PRIKLADNOI KHIMII**  
Vol XXXVII, No 4, 1964

CONTENTS (Contd.)

	P A G E	
	ENG.	RUSS.
An Investigation into the Kinetics of Lead Dissolution in Lead Nitrate Solutions - A. A. Ravdel' and G. N. Gorelik . . . . .	783	778
Electrolytic Deposition of a Cobalt-Nickel Coating on Titanium and Its Alloys - V. V. Bondarev and V. V. Stender . . . . .	789	784
The Effect of Stirring a Medium on the Corrosion Rate of Metals Under the Effect of a Rectangular Low-Frequency Alternating Current - Yu. N. Mikhailovskii . . . . .	794	789
Preparation of Thin Films of Zinc Oxide - Ya. S. Savitskaya and L. A. Ryabova . . . . .	800	796
Nickel-Plating Under the Effect of an Ultrasonic Field - Yu. A. Fel'dman, S. A. Shatsova, and E. E. Gudkova . . . . .	804	800
The Effect of Addition of Foreign Cations on the Formation of Spongy Metal Deposits - N. I. Mikhailov and N. T. Kudryavtsev . . . . .	809	806
Thermodynamic Properties of Cadmium Solutions in a Fused System of Cadmium Chloride - V. P. Mashovets and V. P. Poddymov . . . . .	815	813
The Heterogeneous Composition of an Anode Oxide Film on Aluminum from Data of its Chemical Analysis - V. P. Pavelkina and A. F. Bogoyavlenskii . . . . .	821	819
Drying Bulk Material in a Multi-Stage Apparatus with Fluidized Beds - V. F. Frolov, P. G. Romankov, and N. B. Rashkovskaya . . . . .	825	824
An Investigation of the Azeotropes Formed by Isomers of Xylene and Styrene with Methylcellosolve - Yu. N. Garber and R. A. Bovkun . . . . .	831	831
Determination of the Optimum Ratio of the Volumes of Total Mixing Reactors in a Cascade - K. Khartmann, B. V. Passet, and I. S. Pavlushenko . . . . .	837	838
Investigation of Mass Exchange in the Motion of Drops by a Dynamic Method - M. Kh. Kishinevskii and T. S. Komienko . . . . .	844	844
Investigation of Processes of Regeneration of Moisture Absorbents in a Cyclone-Froth Apparatus - S. A. Bogatykh . . . . .	851	851
Sorption of Pyridine by Carboxyl Resins - A. I. Zhukov, V. M. Markova, and R. V. Pavlinov . . .	859	860
Sorption of Phenols by Anion Exchange Resins of Medium and High Basicity from Dilute Solutions - Yu. Yu. Lur'e and B. P. Krasnov . . . . .	863	864
Some Principles of the Production of Hexachlorocyclopentadiene from Polychlorocyclopentanes - L. M. Kogan and N. M. Burmakina . . . . .	868	869
Extraction of Phosphoric Acid by n-Butyl and Isoamyl Alcohols - I. Ya. Sabaev, I. N. Shokin, and S. A. Krasheninnikov . . . . .	873	874
Methods of Investigating the Acid-Base Properties of Vat Acids of Indigo and Thioindigo - V. G. Abozin and V. V. Karpov . . . . .	879	880
The Influence of Lanthanum and Zirconium on the Stability to Alkali of Silicate Glasses - V. S. Molchanov and T. M. Makarova . . . . .	884	886
The Problem of the Number of Mobile Sodium Ions in Aluminosilicate Glasses - A. A. Pronkin .	886	887
A Study of the Liquid-Liquid-Vapor Equilibrium in the System Propanol-Diphenyl Ether-Water at 25° - N. P. Markuzin and L. S. Shreiner . . . . .	887	888
Cataphoretic Transfer of PbO <sub>2</sub> Particles in a Cadmium Sulfate Solution - O. A. Khan and G. N. Sosnovskii . . . . .	889	890
On the Paper by V. M. Ramm and A. Yu. Zakgeim - V. V. Kafarov . . . . .	892	892
A Study of the Radiation Stability of Some Monofunctional Anion-Exchange Resins - Lou Yun-shen, I. A. Kuzin, and A. M. Semushin . . . . .	893	893
On the Boiling Process in Solutions Containing High Molecular Compounds - V. G. Gleim and Z. M. Lavrova . . . . .	897	896
Stabilization of Magnesium Sulfite Hexahydrate Crystals by the Addition of p-Phenylene- diamine as Inhibitor - V. A. Pinaev . . . . .	899	898

(Continued)

Available From Consultants Bureau

ZHURNAL PRIKLADNOI KHIMII  
Vol XXXVII, No 4, 1964

CONTENTS (Contd)

	P A G E	
	ENG.	RUSS.
Electrolytic Cadmium Plating from Molten Salts—A. V. Gorodyskii and M. I. Bykova . . . . .	901	899
The Rate of Etching of Steel Cleaned and Covered with Oxide Layers—A. S. Afanas'ev and T. V. Malysheva . . . . .	903	901
Transfer of Lead in the Positive Electrode of a Lead Battery—N. A. Balashova, B. N. Kabanov, and L. D. Kovba . . . . .	909	906
The Problem of Increasing the Stability of Foams Used in Dust Suppression in Coal Mines —B. A. Rosenberg, S. S. Shanovskaya, L. D. Kochan, Z. A. Fishilevich, and E. P. Babin .	912	908
Design of Reactors for the Synthesis of Methylchlorosilanes Taking Account of Kinetic Factors —R. S. Fraiman . . . . .	916	911
Investigation of the Cathode Deposit Obtained During the Electrolysis of Aqueous Solutions of Molybdates—A. S. Goncharenko . . . . .	920	915
The Use of Ion-Exchange Resins for the Purification of Pyromucic Acid—A. P. Salchinkin, R. A. Karandasheva, and A. A. Gladkovskaya . . . . .	923	917
The Interaction of Cellulose and Diketene—G. N. Kirillova and G. O. Padchenko . . . . .	925	918
The Initiation of the Chlorination of Methylchlorosilanes by Acetylcyclohexylsulfonyl Peroxide—G. B. Motsarev and V. R. Rozenberg . . . . .	928	920
An Absorption Method for Separating Methylchlorosilanes and the Removal of Unconverted Methyl Chloride in the Direct Synthesis—A. Ermakova and N. G. Morozov . . . . .	931	922
A Polarographic Investigation of Some Derivatives of Anabazine—K. S. Martynova, Z. Kh. Timbekov, and A. S. Sadykov . . . . .	935	926
The Interaction of Natural Rubber with Dialkyl Phosphites—P. N. Zavlin, M. A. Sokolovskii, and R. S. Tenisheva . . . . .	938	928
Infra-Red Absorption Spectra of Baltic Amber (Succinite)—S. S. Savkevich and I. A. Shaks . .	940	930
<b>BIBLIOGRAPHY</b>		
M. G. Faershtein. A History of the Investigation of the Molecule in Chemistry (to 1960) —V. P. Shishokin . . . . .	943	932
G. Koranyi, The Surface Properties of Silicate Glasses—O. V. Mazurin . . . . .	945	933
Methods of Organic Chemistry—N. P. Grachkin . . . . .	947	934

Available From Consultants Bureau



# JOURNAL OF APPLIED CHEMISTRY OF THE USSR

A translation of (ZHURNAL PRIKLADNOI KHIMII)  
a publication of the Academy of Sciences of the USSR

© 1965 CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N. Y.

Volume 37, Number 5

May, 1964

## CONTENTS

	P A G E	
	ENG.	RUSS.
A Physicochemical Analysis of the Hydrothermal Treatment of Obolus Phosphorites —M. A. Veiderma and S. I. Vol'fkovich . . . . .	953	937
The Reduction of $\beta$ -Uranium Dioxide by Solid Carbon—V. G. Vlasov and E. V. Tkachenko . . .	961	946
The Defluorination of Double Superphosphate—S. I. Vol'fkovich, R. E. Remen, E. I. Petrova, and N. B. Timoshuk . . . . .	965	951
Ammonium Polyphosphates—L. V. Kubasova . . . . .	968	955
The Desorption of Chlorine from Saturated Sodium Chloride Solution—I. P. Mukhlenov, A. F. Tubolkin, and E. S. Tumarkina . . . . .	972	960
The Existence of an Adsorption Effect in Systems Used in the Technology of the Hot Casting of Ceramics—V. P. Samoilov and M. N. Kulygina . . . . .	976	965
The Use of the Iron Catalyst in the Contact-Tower Process—I. M. Eseev, I. P. Mukhlenov, and D. G. Träber . . . . .	982	972
Kinetics of the Mixed Adsorption of Arsenic Compounds on Activated Carbon from Nitric Acid Solutions—D. Ya. Evdokimov . . . . .	989	980
Effect of Temperature, Space Velocity and Catalyst Properties on the Conversion of Methanol to Formaldehyde on a Fluidized Bed—A. I. Vitvitskii, I. P. Mukhlenov, and A. Ya. Averbukh . . . . .	993	984
Study of the Aqueous Reciprocal System Composed of Sodium and Ammonium Chromates and Bicarbonates—E. N. Pinaevskaya, N. L. Antoshkina, and N. N. Noskova . . . . .	997	989
Radiometric Method of Studying the Kinetics and Mechanism of the Chlorination Reaction —Ya. Zenkevich and A. V. Lapitskii . . . . .	1007	1000
Sorption of Uranium from Sulfuric Acid Solutions by Anionites—I. A. Kuzin and V. P. Taushkanov . . . . .	1012	1005
The Mechanism of Reactions in the Solid Phase—K. S. Kutateladze . . . . .	1016	1009
Study of the Process of Bubbling Air Through a Mineral Oil Emulsion—V. G. Glein, S. G. Tereshchenko, and T. A. Aleksandrova . . . . .	1020	1014

(Continued)

Available From Consultants Bureau

**ZHURNAL PRIKLADNOI KHIMII**  
Vol XXXVII, No 5, 1964

**CONTENTS (Contd)**

	<b>P A G E</b>	
	<b>ENG.   RUSS.</b>	
Viscosity and Structure of Glasses in the Selenium-Germanium System—S. V. Nemilov . . . . .	1026	1020
The Solubility of the Nitrates, Singly-Substituted Phosphates and Chromates of Quinolin and Isoquinolin in Water—I. G. Belavina and M. M. Potashnikov . . . . .	1030	1025
The Mechanism of Commencement of Boiling in Conical Apparatuses—A. D. Gol'tsiker, N. B. Rashkovskaya, and P. G. Roman'kov . . . . .	1034	1030
The Preparation of Cesium Hydroxide by the Electrolysis of Cesium Chloride at a Solid Cathode in an Electrolytic Vessel with a Horizontal Filtration Diaphragm—S. I. Sklyarenko, I. V. Smirnov, A. P. Rysev, and N. S. Shevtsova . . . . .	1039	1036
The Problem of the Behavior of Indium in Polymetallic Amalgams—A. T. Nizhnik and T. T. Mityureva . . . . .	1045	1042
The Conductivity of the Electrolyte in Porous Nickel Electrodes—O. S. Ksenzhek, E. A. Kalinobskii, and E. L. Baskin . . . . .	1048	1045
The Use of Ultrasonics and Reversed Current in the Electrolytic Deposition of Copper from a Pyrophosphate Electrolyte—V. V. Gurylev, A. I. Levin, and M. Nasakina . . . . .	1055	1053
The Corrosion of Copper in the Presence of Non-Uniform Concentration of Oxidizing Agents in the Solution (Part III)—A. Ya. Shatalov and T. A. Kravchenko . . . . .	1059	1057
The Inter-Crystalline Corrosion of Stainless Steels in Concentrated Nitric Acid—V. S. Kuzub and G. G. Kossyi . . . . .	1064	1063
Study of the Phase Equilibria in the System Water-Hydrogen Chloride-Dioxane at 50°—M. P. Susarev and V. V. Guseva . . . . .	1067	1067
Degradation of Cellulose Triacetate in the Process of Acetylation in the Presence of Benzene—E. P. Kuznetsova and N. I. Klenkova . . . . .	1073	1073
Synthesis of Esters of the Pyridine Series—B. A. Porai-Koshits, I. Ya. Kvitko, I. V. Frankovskaya and O. V. Favorskii . . . . .	1080	1081
Development of Process for the Surface Acetylation of Textile Fiber—V. A. Landysheva, G. O. Radchenko, L. S. Spirina, and E. N. Chernov . . . . .	1087	1087
Cyanoethylation of Nitroparaffins—V. I. Isagulyants and Z. Poreda . . . . .	1092	1093
An Investigation into Factors Influencing the Carboxymethylation Efficiency of Cellulose—Ch. D. Dkhariyal, K. F. Zhigach, A. I. Malinina, I. M. Timokhin, and M. Z. Finkel'shtein . . . . .	1098	1099
Coumarins from Roots of <i>Prangos fedtschenkoi</i> (Rgl. Et Schmalh.) Eug. Kor.—G. A. Kuznetsova and L. M. Sokolova . . . . .	1103	1105
<b>BRIEF COMMUNICATIONS</b>		
Solubility in the System Urea-Phosphoric Acid-Water—I. M. Kaganskii, G. S. Mukhlya, V. M. Khariamova, and V. A. Naumov . . . . .	1107	1111
Distillation of Sodium and Potassium from Industrial Waste—A. P. Sachko . . . . .	1113	1116
Infrared Absorption Spectra of Baltic Amber—S. S. Savkevich and I. A. Shakhs . . . . .	1117	1120
The Electrical Conductivity of Copper-Containing Chalcogenic Glasses—A. V. Danilov . . . . .	1120	1122
The Mechanism of the Effects of Gypsum on the Setting Rate of Portland Cement—T. K. Brutskus and E. E. Segalova . . . . .	1124	1126
Polarography of Melts with Use of a Dropping Bismuth Electrode—I. I. Naryshkin and L. A. Gavrilor . . . . .	1129	1130
Synthesis and Properties of Dialkylcyclohexyl Phosphates—K. A. Petrov, É. E. Nifant'ev, I. I. Sopikova and L. P. Levitan . . . . .	1132	1132
Oxidation of Wood Charcoal by Air in Alkalis—K. V. Kisin and A. G. Rembashevskii . . . . .	1135	1135
Preparation of Hydroaromatic Dicarboxylic Acids—G. S. Gurevich, S. Z. Levin, and I. S. Diner . . . . .	1140	1139
Properties of Film-Forming Solutions of Fluoroorganic Polymers—Z. V. Shirokshina . . . . .	1142	1142

(Continued)

Available From Consultants Bureau

ZHURNAL PRIKLADNOI KHIMII  
Vol XXXVII, No 5, 1964

CONTENTS (Contd)

	P A G E	
	ENG.	RUSS.
Synthesis of Nitrocarboxylic Acid Esters in the Presence of Anionite AV-17—V. I. Isagulyants and É. L. Markosyan . . . . .	1146	1145
The Effect of Moisture, Methanol and Oxygen in Methyl Chloride on the Synthesis of Methylchlorosilanes—N. P. Lobusevich, I. V. Trofimova, K. A. Andrianov, and S. A. Golubtsov . . . . .	1150	1148
Synthesis of Polyvinylene Glycol—O. M. Klimova, A. M. Kuras, V. V. Stepanov, and N. I. Kharlamova . . . . .	1154	1152
Determination of the Solubility of the Disodium Salt of Ethylenediaminetetraacetic Acid (Versene)—E. S. Bruile and K. S. Merkulova . . . . .	1157	1155
Synthesis of Sulfo Derivatives of Cellulose—D. L. Snezhko, A. D. Virnik, and Z. A. Rogovin . .	1158	1156
Synthesis of Cyanuric Acid from Urea—N. I. Malkina and S. N. Kazarnovskii . . . . .	1161	1158
An Investigation into Equilibrium in the System Oxide-Metal-Gas by the Electrical Conductivity Method—E. S. Vorontsov and A. V. Ermakov . . . . .	1163	1160
A New Method of Obtaining 2,5-Dimethylpyridine (2,5-Lutidine) from Coal Tar—E. M. Gepshtein . . . . .	1166	1162
The Effect of Substituents on the Dissociation Constants and Spectra of Leucothioindigoids—V. V. Karpov and V. G. Abozin . . . . .	1169	1165
The Presence of Anthracene in Neutral Oils of Gas-Generator Settling Tank Tar from Gasification of Conifers—V. P. Kozlov and D. V. Tishchenko . . . . .	1172	1168

Available From Consultants Bureau

# JOURNAL OF STRUCTURAL CHEMISTRY

*A translation of ZHURNAL STRUKTURNOI KHIMII,  
a publication of the Academy of Sciences of the USSR*

© 1965 CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N.Y.

Volume 5, Number 2

March-April, 1964

## CONTENTS

	P A G E	
	ENG.	RUSS.
Interpretation of Vapor Electronograms Corrected for the Nuclear Motions in the Molecules.		
3. The Blotting-Out of Characteristic Features in the Molecular Diffraction Pattern		
—N. G. Rambidi . . . . .	165	179
Electron Diffraction Study of the Structure of the Vinyltrichlorosilane Molecule—L. V. Vilkov,		
V. S. Mastryukov, and P. A. Akishin . . . . .	168	183
Mechanism of Self-Diffusion in Water—Yu. V. Gurikov . . . . .	173	188
Investigation of the Diffusion Movement of Water Molecules in Solutions of Paramagnetic Ions		
by Proton Resonance Measurement—K. Grünther and H. Pfeifer . . . . .	177	193
Proton Spin Relaxation Study on the Solvation of the $Mn^{2+}$ Ion in Formic Acid—D. Geshke		
and H. Pfeifer . . . . .	184	201
Nuclear Magnetic Resonance Spectra and Structure of 1,3-Dioxanes, 1,3-Dioxolans and Some		
Cyclic Esters of Sulfurous and Carbonic Acids. 1. 1,3-Dioxanes and 1,3-Dioxolans		
—Yu. Yu. Samirov and R. M. Aminova . . . . .	189	207
The Effect of the Anisotropy of the Molecular g-Factor on the Width of Electronic Paramagnetic		
Resonance Lines in Solutions—A. A. Kokin . . . . .	198	217
Determination of the Spin-Hamiltonian Parameters for Copper Salts with S-1 from Electronic		
Paramagnetic Spectra of Polycrystals—Yu. V. Yablokov . . . . .	202	222
Calculation of the Intramolecular Second Moment of Proton Resonance Absorption Lines		
in Polybutadienes—N. M. Sergeev and V. L. Karpov . . . . .	208	230
X-Ray Structure Analysis of Alloys of the ZnSb—CdSb System—Yu. P. Keloglu and A. S. Fedorko.	213	236
The Structure of $P_4O$ and Red Phosphorus—A. I. Soklakov and V. V. Illarionov . . . . .	218	242
The Structure of $AgFeTe_2$ —A. I. Zaslavskii and T. B. Zhukova . . . . .	222	246
More Accurate Data on the Structure of Crystals of Potassium Nitrosylhydroxotetrakisruthenate		
—L. A. Butman, T. S. Khodashova, L. Kh. Minacheva, and V. I. Tayukin . . . . .	225	250
More Accurate Determination of the Structure of Ferrocenedisulfonyl Chloride—O. V. Starovskii		
and Yu. T. Struchkov . . . . .	231	257
Possible Superstructures in the N-th Layer of Close Packing for the Cases in Which the B Atoms		
Have 3 or 4 Neighboring A Atoms—N. L. Smirnova . . . . .	235	261
The Effect of Shielding and the Size of the Overlap of d-Orbitals on Some Properties		
of Equiatomic Oxides and Carbides of Ti, V, and Nb—V. A. Tskhai and P. V. Gel'd . . . .	247	275

(Continued)

Available From Consultants Bureau

CONTENTS (Contd)

	P A G E	
		ENG.   RUSS.
Magnetic Susceptibility of Some Compounds of Rhenium—V. I. Belova, Ya. K. Syrkin, E. G. Ippolitov, A. S. Kotel'nikova, G. K. Babeshkina, and R. A. Dovlyatshina . . . . .	252	281
Calculation of the Best Hybrid Orbitals of the Central Atom in $MX_k$ Molecules—A. A. Levin . .	258	288
A Geometrical System of Electronegativities—S. S. Batsanov . . . . .	263	293
<b>BRIEF COMMUNICATIONS</b>		
Magnetic Relaxation of the $Li^7$ Nucleus in Aqueous Solutions of Paramagnetic Salts —R. K. Mazitov . . . . .	271	302
Proton Resonance in Uranium Peroxide Hydrates—S. P. Gabuda, Yu. V. Gagarinskiĭ, S. A. Durasova, and A. G. Lundin . . . . .	273	303
Paramagnetic Properties of Polycyclopentadiene—N. M. Lapshin, N. I. Ovcharenko, and M. L. Khidekel' . . . . .	276	305
The Structure of the Protonated Tetraphenylhydrazinium Ion-Radical—G. A. Razuvaev, G. A. Abakumov, and V. A. Pestunovich . . . . .	278	307
An Investigation of the Structure of Some Urea and Guanidine Derivatives. I. Infrared Spectra and Structure of Diureides and Diguanyls of Cyclohexandione and Phenanthraquinone and Their N-Chloroderivatives—D. F. Kutenov, S. S. Dubov, and O. G. Strukov . . . . .	281	309
Dipole Moments of the Spacial Isomers of 2-Methyl-4-Ketooctahydropyrindene-1 —I. Yu. Kokoreva . . . . .	286	314
The Role of the Volume Factor on the Formation of the Sigma-Phase—V. N. Bykov and V. A. Solov'ev . . . . .	288	315
Crystal Structure of the Monoclinic Modification of $SrB_2O_4 \cdot 4H_2O$ —V. B. Kravchenko . . . . .	291	317
The Crystal Structure of Strontium-Apatite—R. F. Klevtsova . . . . .	292	318
Space Groups and the Elementary Lattices of Organic Compounds. Communication 3. X-Ray Study of Some Alkali Salts of Dinitroalkanes—Z. S. Kosturkevich and Yu. T. Struchkov . . . . .	295	320
Space Groups and the Elementary Lattices of Organic Compounds. Communication 4. Mesityl-methylsulfone, Durylmethylsulfone, and Durylsulfonyl Chloride—Z. S. Kosturkevich and Yu. T. Struchkov . . . . .	297	322
Space Groups and Elementary Lattices of Organic Compounds. Communication 5. Derivatives of Pyridine and Quinoline N-Oxides—Z. S. Kosturkevich . . . . .	299	323
The High-Temperature Modification of 1,8-Dinitronaphthalene—V. M. Kozhin . . . . .	301	324
The Nature of the Re—O Bond in $K_2ReO_2(CN)_4$ —M. E. Dyatkina and Yu. N. Mikhailov . . . . .	302	325
The Electronic Structure and Properties of Cumulative Systems. 3. The Effects of Inter-electronic Interaction in Organic Cumulenes—E. M. Shustorovich . . . . .	303	325
On the Theory of Calculating the Most Stable Configurations of the Molecule $MX_k$ by the Method of Maximum Overlap—A. A. Levin . . . . .	307	329
<b>REVIEW</b>		
Complex Compounds of Silicon—N. M. Alpatova and Yu. M. Kesler . . . . .	310	332
<b>CHRONICLE</b>		
Problems of the Methods of Structural Analysis at the Vth International Crystallographic Congress—V. I. Simonov . . . . .	332	354

Available From Consultants Bureau

UNCLASSIFIED  
Central Intelligence Agency



Washington, D.C. 20505

7 September 2004

Ms. Roberta Schoen  
Deputy Director for Operations  
Defense Technical Information Center  
7725 John J. Kingman Road  
Suite 0944  
Ft. Belvoir, VA 22060

Dear Ms. Schoen:

In February of this year, DTIC provided the CIA Declassification Center with a referral list of CIA documents held in the DTIC library. This referral was a follow on to the list of National Intelligence Surveys provided earlier in the year.

We have completed a declassification review of the "Non-NIS" referral list and include the results of that review as Enclosure 1. Of the 220 documents identified in our declassification database, only three are classified. These three are in the Release in Part category and may be released to the public once specified portions of the documents are removed. Sanitization instructions for these documents are included with Enclosure 1.

In addition to the documents addressed in Enclosure 1, 14 other documents were unable to be identified. DTIC then provided the CDC with hard copies of these documents in April 2004 for declassification review. The results of this review are provided as Enclosure 2.

We at CIA greatly appreciate your cooperation in this matter. Should you have any questions concerning this letter and for coordination of any further developments, please contact Donald Black of this office at (703) 613-1415.

Sincerely,

A handwritten signature in cursive script, reading "Sergio N. Alcivar".

Sergio N. Alcivar  
Chief, CIA Declassification Center,  
Declassification Review and Referral  
Branch

Enclosures:

1. Declassification Review of CIA Documents at DTIC (with sanitization instructions for 3 documents)
2. Declassification Status of CIA Documents (hard copy) Referred by DTIC (with review processing sheets for each document)

UNCLASSIFIED



## Processing of OGA-Held CIA Documents

The following CIA documents located at DTIC were reviewed  
by CIA and declassification guidance has been provided.

OGA Doc ID	Job Num	Box	Fldr	Doc	Doc ID	Document Title	Pub Date	Pages	Decision	Proc Date
AD0463342	78-03109A	55	1	2	88	Consolidated Translation Survey For April 1965	4/1/1965	190	Approved For Release	3/25/2004
AD0465168	78-03109A	55	1	3	89	Consolidated Translation Survey For May 1965	5/1/1965	245	Approved For Release	3/25/2004
AD0467068	78-03109A	55	1	4	90	Consolidated Translation Survey For June 1965	6/1/1965	221	Approved For Release	3/25/2004
AD0468849	78-03109A	55	1	5	91	Consolidated Translation Survey For July 1965	7/1/1965	218	Approved For Release	3/25/2004
AD0471155	78-03109A	55	1	6	92	Consolidated Translation Survey For August 1965	8/1/1965	236	Approved For Release	3/25/2004
AD0473500	78-03109A	55	1	7	93	Consolidated Translation Survey For September 1965	9/1/1965	221	Approved For Release	3/25/2004
AD0474384	78-03109A	55	1	8	94	Consolidated Translation Survey For October 1965	10/1/1965	181	Approved For Release	3/25/2004
AD0475860	78-03109A	55	1	9	95	Consolidated Translation Survey For November 1965	11/1/1965	305	Approved For Release	3/25/2004
AD0477388	78-03109A	56	1	1	96	Consolidated Translation Survey For December 1965	12/1/1965	181	Approved For Release	3/25/2004
AD0478471	78-03109A	56	1	2	97	Consolidated Translation Survey For January 1966	1/1/1966	198	Approved For Release	3/25/2004
AD0479675	78-03109A	56	1	3	98	Consolidated Translation Survey For February 1966	2/1/1966	354	Approved For Release	3/25/2004
AD0481681	78-03109A	56	1	4	99	Consolidated Translation Survey For March 1966	3/1/1966	237	Approved For Release	3/25/2004
AD0334379	78-03117A	191	1	37	4255	Status And Activities Of Prominent Scientists In Communist China In 1962	1/29/1963	53	Approved For Release	3/29/2004
AD0333974	78-03117A	190	1	35	4212	Scientific Information Report Outer Mongolia (1)	1/17/1963	27	Approved For Release	3/29/2004
AD0335202	78-03117A	195	1	13	4394	Scientific Information Report Outer Mongolia (2)	3/13/1963	27	Approved For Release	3/25/2004
AD0332657	78-03117A	183	1	13	3924	Scientific Information Report Biology And Medicine (22)	10/12/1962	76	Approved For Release	3/29/2004
AD0333147	78-03117A	185	1	30	4020	Scientific Information Report Biology And Medicine (23)	11/16/1962	90	Approved For Release	3/29/2004
AD0333427	78-03117A	188	1	13	4112	Scientific Information Report Biology And Medicine (24)	12/13/1962	84	Approved For Release	3/29/2004
AD0334160	78-03117A	190	1	10	4187	Scientific Information Report Biology And Medicine (25)	1/10/1963	69	Approved For Release	3/29/2004
AD0334612	78-03117A	193	1	10	4310	Scientific Information Report Biology And Medicine (26)	2/20/1963	112	Approved For Release	3/29/2004
AD0335309	78-03117A	195	1	32	4413	Scientific Information Report Biology And Medicine (27)	3/20/1963	110	Approved For Release	3/29/2004
AD0336242	78-03117A	198	1	16	4509	Scientific Information Report Biology And Medicine (28)	4/12/1963	81	Approved For Release	3/29/2004
AD0332575	78-03117A	184	1	6	3957	Scientific Information Report Chemistry And Metallurgy (22)	10/23/1962	47	Approved For Release	3/29/2004
AD0333164	78-03117A	187	1	2	4061	Scientific Information Report Chemistry And Metallurgy (23)	11/28/1962	65	Approved For Release	3/25/2004
AD0333857	78-03117A	189	1	22	4160	Scientific Information Report Chemistry And Metallurgy (24)	1/2/1963	57	Approved For Release	3/29/2004
AD0334310	78-03117A	191	1	20	4238	Scientific Information Report Chemistry And Metallurgy (25)	1/28/1963	52	Approved For Release	3/29/2004